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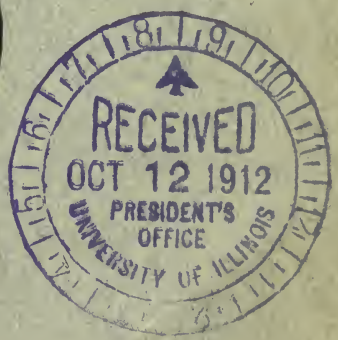
University of Pennsylvania

PROCEEDINGS OF COMMENCEMENT

JUNE 19, 1912



Founded 1740



PHILADELPHIA:
Published by the University
October, 1912

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Publications
OF THE
University of Pennsylvania

PROCEEDINGS
OF
COMMENCEMENT

JUNE 19, 1912



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October, 1912



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PROGRAMME

Procession

Graduating Classes, Deans and Members of Faculties.
Members and Guests of the Corporation, Chaplain,
Orator of the Day, the Vice-Provost and the Provost.

Invocation

THE REV. ALEXANDER MACCOLL
Chaplain of the Day.

Hymn—"Our Father in Heaven"

Conferring of Honorary Degrees

Introduction

THE PROVOST OF THE UNIVERSITY.

Oration

President JOSEPH SWAIN
Swarthmore College

Hymn—"Hail, Pennsylvania"

Conferring of Degrees in Course

Charge to the Graduating Classes

BY THE PROVOST

Hymn—"Now Thank We All Our God"

Presentation of Portraits

Benediction

THE CHAPLAIN OF THE DAY.

METROPOLITAN OPERA HOUSE, JUNE 19, 1912.

HONORARY DEGREES

Master of Arts

EDWARD ROBINS

Doctor of Sacred Theology

GEORGE WOOLSEY HODGE

Doctor of Laws

JOSEPH SWAIN

LOUIS ADOLPHUS DUHRING

JAMES TYSON

JOHN GRIER HIBBEN

JOHN CADWALADER

DEGREES IN COURSE

Bachelor of Arts

William Henry Adolph	Earle Hepburn
Anthony Lockwood Arnold	Henry Barret Heyburn
Albert Croll Baugh	William Edward Howe
Mary Baylson	Henry Dexter Learned
Vincent Leroy Bennett	Nellie Welsh Lohr
William Henry Boswell	Robert Erwin Luckenbill
William Bradford	Alfred Reeves McWilliams
Laurence Ladd Buermeyer	William James Mawhinney
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Michele Frasca	Florence M. Schlarbaum
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	Morris Teller

Bachelor of Music

John W. Barrington	Josie M. Holton
Albert Joseph Dooner	Florence Emily Taylor
	Gabriel Lincoln Hines

Bachelor of Science

Carrie Adler	Leslie Worthington Graham
Guy Elmer Albert	William Torbert Ingram Hall
William Bates	Mary Thornton Haydock
Albert Reiff Bechtel	Ernest Leo Herold
Elsa Wilhelmina Berger	Walter Williams Hess
James Wiley Bodley	Gilbert Robert Hughes
Carl Joseph Bucher	William Roberts Ingersoll
Frank Davis Caruthers	George Ruddell Kent
Miller Aiken Cassedy	David Livingstone Kerr
William Caie Culbertson	William Louis Kershaw
Lambert Lisle Davis	Morris S. Knebelman
Ethel Downsborough	Charles J. Kunz, Jr.
Alice Potter Ervin	Brice Walter Lemmon
Horace B. Faber	Elgin Harleman Lenhardt
Sydney Allmayer Farbish	Joseph Leswing
Harold William Faunce	Alvin Leopold Levi
Arthur Wesley Ferguson	Anne Linton
Henry Flury	Elizabeth Linton
Thomas Townsend Frasier, Jr.	Harold Stern Loeb

Bachelor of Science—Continued

Stuart Fleisher Louchheim	Alvin Andrew Schlegel
Henry Morton McMichael	Harry Wilt Schlehner
Adeline Kerr Merritt	Charles Schlow
Morris Hill Merritt	Jay Williams Sechler
Sarah Evelyn Miles	Willis Edwin Seiders
Andrew Park Orth	Leo Seidman
Mary Clagett Patterson	Morris Josselovitz Selis
Mary Craig Peacock	Herbert Benjamin Shearer
Leonard Snow Pearson	Stanley Snellenburg
Henry Albert Porter	Walter Hendricks Renner Trumbauer
Ferdinand M. Reyher	John Malcolm Weber
Carroll Brewster Rhoads	C. A. Heckscher Wetherill
Louis Harry Richards, Jr.	Frank F. Williamson
Alice Rodman	Jay Wesley Worrall
Jessie A. Rodman	A. Duncan Yocum, Jr.

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Raymond Rogers Chatfield	Raymond Mathews
Walter Solomon Cohen	Frederick A. Muhlenberg
Edward Allison Curtis	Erle James Osborne
James Richard Edmunds, Jr.	William M. Schwab
Earle Nelson Edwards	Willard See
Douglas Dobell Ellington	William Deford Smith
Harrison Jay Hartman	Melvin Pratt Spalding
Russell Griffith Howard	Claude Wilmot Stedman
John Walter Ketterer	George Orange Stedman
David E. Lehman	Harrison Townsend, Jr.
S. Arthur Love, Jr.	William Chambers Tyler
Lewis Brosius Walton	

Bachelor of Science in Biology

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Myrtle Imogene Schoch	

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Frank Meade Crumback	Maxwell Sillman
Allen Joseph Hancele	Harry Roswell Stevens
Leon Stuart Holdstein	Howard Andrew Walter

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Frederick Doyle	Herbert Henry Meyers
George Kennett Flavell	Hubert Luttman Stair
Robert Weiss Kunzig	Clarence Herman Walker
Edgar Albert Levi	Frederick Raymond Weimert
Charles MacDonnell	Franklin Shearer Weiser
Charles Henry Winter	

Bachelor of Science in Civil Engineering

Edwin Austin Abbey, 2d
 Harry Austin
 Max Barab
 Charles Adam Bareuther
 Russell Robinson Barrett
 Norman V. Bureau
 Clarence Middleton Burnett
 Russell Clark Chesebrough
 James Singleton Clay
 Levi Dudley Coles
 Irvin Monroe Cupitt
 Francis Xavier Daily
 Benjamin J. Dudnick
 J. Joseph Edelman
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 J. Marion Fuhrman
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 John Adam Hagan
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 Louis Raymond Jones
 Robert Halliday Joyce
 S. Sheldon A. Keast

Charles H. Kline, Jr.
 Roswell Gallup Lamb
 Philip Landow
 Henry Linker
 James Johnson McCutcheon
 Richard Louis McGrann
 Edward Evans Meacham
 Harold Brown Miller
 Kenneth Lossing Miner
 John Allen Mitchell
 Albert Nalle
 Walter Ridgely O'Sullivan
 Herbert Millette Packer
 Isadore Ress
 Frederick Edward Roth
 August Henry Schell
 Meritt Abbott Halliday Scull
 Charles Moore Shallenberger
 Emanuel Hey Shoemaker
 John Knight Shryock
 Earle Lafayette Smith
 Theodore Elmer Transeau
 Frederick Marsh Williams
 Charles Harrison Wolf
 Robert Luther Young

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 Leon M. Adler
 Murvyne Kirk Allebach
 Harry Wallis Anderson
 Frank Harcourt Black
 Harry Braverman
 Thomas Allibone Budd
 William Raymond Carver
 Horace Manly Casner
 Charles Newell Carns
 Edward Thomas Cogan
 Charles Peter Corcoran
 Charles Russell Corson
 Orin Stewart Cunningham
 Edwin Levi Crowell
 William H. Dallas
 Charles M. Davis
 Charles P. Davis
 Edwin Leroy Delong
 George Lewis Elliott
 Morton Earle Evans
 Glendon Morrell Fisher
 Charles Hiram Gilbert
 Horace Weldon Haydock
 Charles William Hitschler
 Walter Lee Horigan
 Dana Greenleaf How
 Don Cameron Kent

Chauncey Charles Kennedy
 Alexander Kerr, Jr.
 Frederick Henry Koschwitz
 Harold Havelock Kynett, Jr.
 Earle Bernard Lafean
 Arthur William Laffamme
 Alexander Laird
 Juan Luis Lemos
 William Edward Moessinger
 Robert Weir Mooney
 Frank Bowen Mulford
 Joseph Judson Norris
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 Nathaniel Allan Pettit
 Hoffman Allan Pryor
 Everett Wesley Roberts
 Charles Snowden Rockey
 Bertram Israel Samter
 John Alexander Scott
 Thomas McLane Schonour
 Howard Raymond Seeger
 Clarence John Shoemaker
 Henry Frank Singer
 Albert Vernon Smith
 Merrill Wolverton Smith
 Ray Horton Smith
 Harry E. Snyder
 Ernest Albert Stifel

Bachelor of Science in Economics—Continued

Harold Barton Stone	Marshall Mounts Vance
Carl Christoff Strahley	Michael Angelo Viracola
Edmund Thayer	Ralph Detmar Ward
Henry La Rue Thompson	William Warner
Radcliff Morris Urquhart	William Corkin Williamson, Jr.

Bachelor of Science in Electrical Engineering

Willoughby Bainbridge	Albert Romaine Markland
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James Albert Cadwallader	Miles Heckendorn Read
John Corry	William Charles Rommel
Henry Benning Cowan	Leroy Wellington Seltzer
Rodney N. Davis	Henry Joseph Smith
George Edward Deming	John H. Stortz
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Eugene Phillips Kiehl	Earle Pierce Yerkes

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Herbert Keen Ball	Joseph William Hand
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Carl William Burket	Horatio Howard Morris
Edward Osborne Coates	Frank Arick Newcomb
James Benjamin Cutler	Harry Spearing Owens
Hugo Dalsheimer	George Platt Pilling
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John Struthers Dunn	Conrad John Sauter, Jr.
Joseph Esherick	William Wagner Schultz
John Orson Findeisen	William August Schmidheiser
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Alexander Purves Gest, Jr.	Ralph R. Teeter
Herbert Christian Gross	Robert Stewart Tyrrell
Conrad Velder Hahn	Harry Wolf
William C. Hampton	Edgar Fallows Wright
	Arthur William Zehetner

Civil Engineer

Harry Bortin	Howard Howell George
Alexander Foster, Jr.	William Garrett Grove
	Maurice Anderson Webster

Electrical Engineer

Elmer Langham Kyle

Master of Science in Architecture

Otto Eugene Adams
James Herbert Gailey
Frederick Watson Hastings

Robert Rodes McGoodwin
Otto Victor Reeser
Albert Simons

Doctor of Philosophy

Newcomb Kinney Chaney
Ralph Winfred Duncan
Robert Carithers Duncan
Engelhardt August Eckhardt
Arthur Llewellyn Eno
Samuel Wciller Fernberger
Walther Paul Fischer
Clarence Oran Gardner
John Theodore Geissendoerfer
Hymen Leo Grabosky
Edwin Ray Guthrie, Jr.
Paul Van Brunt Jones
Quincy Adams Kuehner
Matthew Willard Lampe
William Joseph McCallen
Joseph Madison McCallie
Martha Gause McCaulley

Francis Norton Maxfield
John Musser
Ernest Minor Patterson
Alice Paul
Henry Schaefer
C. Linn Seiler
Clarence Leonard Staples
William Harrison Spring Stevens
Ambrose Leo Suhrie
William Warren Sweet
Reuel Hull Sylvester
Helen Bell Trimble
Francis Doughten Tyson
Charles Adam Wagner
James Jefferson Watson
Edward Embree Wildman
Clarence Andrew Young

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Darius Weller Berky
Caleb Valentine Bready
Arthur T. Cameron
William Seal Carpenter
Giuseppe Cherubini
L. Howell Davis
Giovanni M. Di Silvestro
Marshall Hand Diverty
Howard S. Eitzel
Thomas Dawes Eliot
Clement Edgar Foust
William Stokes Garrison
Percy Warren Green
Garton Spence Greene
John Mansfield Groton
Carolus Powel Harry
Lin-yi Ho
Mabel Dodge Holmes
Gilbert Robert Hughes
Jeannette Keim

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Max Fisher Lehman
Esther Louise Little
Claude Delmont Locke
George William McClelland
Charles Edward Meyers
Frieda Mueller
Thomas Gilson Parris
John Young Pennypacker
Louise Franklin Perring
William Jerome Potter
Henry Ferris Price
Clara May Reinheimer
Beecher Lee Rhodes
William Ely Roberts
David R. Rohrbach
Florence Rothermel
Frank Henry Schrenk
Oscar Matthias Sullivan
Jacob Tanger
Louis James Velte
Edgar Eugene White
Irvin Cooke Williams

Master of Science

Wilmer Fletcher Burns

Hezzleton E. Simmons
Chenku Philip Yao

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John Horace Treager Adams
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 Samuel Huntley Beckett
 Stanislaus Daniel Bell
 Frederick William Breiting
 Everett Henry Brown, Jr.
 Harry Cassman
 Walton Clark, Jr.
 John Browning Clement, Jr.
 Joseph Hunsicker Cochran
 David Henry Cohen
 Clarence Ernest Davis
 William Wesley Deacon
 Philip Diamond
 Harwell Beeson Dutton
 Arthur M. Eastburn
 Byron F. Ely
 William Stephen Fenerty
 Gladstone Fessenden
 Charles Pasquale Fusco
 George Belvin Gifford
 William John Gilfillan
 Malcolm Abraham Goldsmith
 Harry Goodfriend
 Louis Arthur Greenstein
 Reginald Stanley Hemingway
 Mayer Elias Herman
 James Burnette Holland
 Allan Irving Huckins
 Fred Albion Hughes
 George Hughes Kaercher
 John Joseph Kennedy
 Otto Bismarck Kiesewetter
 Herman David Levinson
 William Barclay Lex
 Frank William Lincoln
 Thomas Kane Mahlon

John Garvin Marshall
 Herman Henry Mattmann
 Clifford Ruslen Meloney
 Arthur Hagen Miller
 Charles Lichty Miller
 Paul Van Reed Miller
 Juan Demofilo Miranda
 John Blair Moffett
 Herman Moskowitz
 Roland Heishon Mulford
 Arthur Emlen Newbold, Jr.
 Lambert Ott, Jr.
 Harold Clarke Parkin
 James Craig Peacock
 Charles Petchon
 Arthur Nathan Presmont
 Andrew Francis Quinn, Jr.
 Ignatius Aloysius Quinn
 David Edward Rattin
 Marcus Hess Rosenthal
 Ellwood Joseph Rotan
 James Francis Ryan
 Herbert Wieder Salus
 Frederick Christopher Schaeffer
 William Abraham Schnader
 Charles Henry Scott, Jr.
 Leighton Pearson Scott
 Charles Alison Scully
 Harry Sigmond
 Alexander Raubenold Staples
 Erwin Sturm
 Herbert Plash Sundheim
 Howard Sheldon Tiel
 Francis Raymond Wadlinger
 Wilton Wells Webster
 Charles Hart Wetter
 Charles Frederick White
 Furman Buck Willis
 Robert Belville Woodbury

Clarence Earle Yeager

Doctor of Medicine

Markley Connel Albright
 John Harrison Alexander
 Harry William Bagenstose
 Harry Francis Bailey
 William Henry Barnes
 Edward Hagop Bedrossian
 Howard Homer Bell
 Russell Sage Boles
 David Simon Brachman
 Morris Renfrew Bradner
 Ralph Shepherd Bromer
 Henry Paul Brown, Jr.

James White Bruce
 Esteban Garcia Cabrera, Jr.
 Arthur Ward Carley
 Arthur Aldridge Collins
 Thomas Wood Cook
 Leon Calvin Darrah
 Julius Otis Denelsbeck
 Arthur Ulderic Desjardins
 John McCrea Dickson
 Isaac Slaymaker Diller
 John Diven
 Charles Herbert Doe

Doctor of Medicine—Continued

Francis Albert Bennett Donlan	Edward Humphrey Marshall
James Tickell Downs, Jr.	Sergeant Price Martin
Edgar Arthur Draper	William Henry Mayer
Archibald Wallace Dunn	William Anthony Monaghan
Thomson Ford Edwards, Jr.	John Walker Moore
William Benedict Evans	Dennis Ray Murdock
James William Farrior	Harry Isaac Newcomet
Sterling Otelius Fields	Thomas C. Newsom
Ezra Simpson Fish	Cyril Patriek O'Boyle
James Lee Gilmore	Jacob Pearl
Rush Clayton Godfrey	Charles Orley Peters
*Leo Goldberg	Charles Edward P. Pike
Richard Alexander Graves	Elmer John Presper
John Lick Groh	Jewell Beauchamp Procter
Paul Dawson Hanley	Rufus Sargent Reeves
Edward Kelly Hanson	Robert Percy Reymond
Herbert Thurlow Harmon	Wilbur Paul Rickert
David Jackson Hawk	George Ward Rockwell
Otto Christian Hirsch	Alex Morton Rosenblum
Ernest Justin Hoover	Arthur Crawford Rothrock
Richard Dale Hopkinson	Norman Stanley Rothschild
Harold Waldron How	Harry Rubin
Gideon Lyman Howell	Leslie Crawford Russell
Samuel Clemens Jaspán	Aaron Leidy Ruth
Russell R. Keeler	Gerald Frederic Schaffner
Harry James Kerr	Jacob Max Schildkraut
John Donovan Kessler	Edgar Ferdinand Schmitz
Clarence Henry Ketterer	Philip Herman Schwartz
Walter Scott Keyting	Louis Segal
Clapham Price King	Tobias Cletus Shookers
Edward Ambrose King	John Christopher Simpson
Joseph Victor Klauder	Sumner Clelland Simpson
Paul Howard Kleinhans	Thomas La Vere Sisney
Laird Franklin Kroh	Daniel Arthur Smith, Jr.
Samuel Francis Larned	Irwin Bradfield Smock
John Francis Lewis, Jr.	Oliver Holt Stansfield
Maxwell John Lick	William Wyckoff Stevenson
Thomas Henry Llewellyn	George King Strode
Abraham Isador Loewenthal	John Francis Sweeney, Jr.
Eugene Clayton Lowe	Alfred Robert Thomas, Jr.
Edward Emanuel Lupin	David Wesley Thomas
Gilpin Montieth McCain	Charles Henry Tidd
Clinton Preston McCord	John Hart Toland
Joseph Leo McGinley	Benjamin Morgan Vance
Robert Newcomb McHenry	John Carl Wahl
Paul Edgar McNabb	Ralph Ward Walker
Montrose Bovard Magoffin	Max Johannes Walter
Joseph Anthony Manzella	James Ralston Wells
Ralph Montgomery Markel	Charles Christian Wolferth
Philip Edward Marks	Harry Frederick Zinsser

Doctor of Public Hygiene

Ira Ayer, M.D.	Frank Hynard Edsall, M.D.
John Thomas Borden, M.D.	Henry Field Smyth, M.D.

* Name since changed by decree of court to Leonard Galton.

Doctor of Public Hygiene (Retroactive)

John Anderson Johnston, M.D. William John LeHunte Lyster, M.D.
 Harold Bacon Wood, M.D.

Certified Sanitarian

Samuel Reynolds Parke, Jr.

Doctor of Dental Surgery

William Richard Bailey	Alexander Patrick Husband
Edwin Henry Bestic	Ralph Henry Hutchinson
Philip Chaplin Brackett	Harry Miller Imlay
Joseph Aloysius Bray	Lafayette Lee Irvin
Edgar Zeh Briggs	David Hayes Agnew Irwin
Walter Harold Broad	John Harry Johnson
John Draper Brown, Jr.	William Brendel Jones
Louis Jean Bruschera	William Edward Jones
Maurice Bury	John Whitman Joslin, Jr.
Herbert William Cairns	William Jost
Hugo Caminha	Myrle Kaley
Henry McCormick Carter	Joseph Francis Keeley
Arthur Irwin Chapman	Calvert Edward Kelly
Guy Brougham Chapman	Percy Edgar Kendall
William Francis Clarke	Kenneth Younger Kerr
Hugh William Close	Francis Magnus Kiel
Joseph Michael Creegan	Milton Alexander Kirshbaum
Arthur William Crowley	Marcel Raoul Leplat
Martin Thomas Cunningham	John Edward Walter Lockery
Edward George Dolan	Carleton Francis Lore
Edward John Donehue	René Marcel Alexandre Loyer
William Henry Donovan	Fred Armstrong McComb
Donald MacPherson Dougall	Joseph McCrystal, Jr.
Burt Abbott Easton	Ernest James McDougall
Herbert Elwood	Francis Joseph McKeon
De Forrest Willard Ewing	Edward Koch McPherson
LeRoy Webster Farley	Douglas Graham Macfarlane
James Colin Finlay	George Macphee
Willard Albion Fosdick	Robert Hoopes Maris
Herman Nickerson Foster	Leonard Frederick Martin
Austin Corbin Frank	Andrew Louis Massonnet
Raymond Earl Frey	Charles Joseph Meyer
Edmond Gustaaf Friederich	Fred Duffield Miller
Joseph Ernest Gabriel	Carlos H. Molina
Arvy Addison Garfat	Robert Dunham Morris
Gustave Armand Gonard	Roy Nadin Morrow
John Joseph Gorman	James Jeremiah Moynihan
Enrique José Gramcko	Wilford Gibbud Munson
Walter Leon Gray	Roscoe John Nash
John Edward Henry Guthrie	Guy Elwin Nicholas
William Nathaniel Hamilton	Benjamin Howard Northrop
Jacob Glen Hanna	George Washington Oestreich
Francis John Harris	Cornelius Joseph O'Leary
Edward Morgan Holmes	Thomas Homer Olive
Richmond Vernon Hooper	George Eugene Parker
William Hayes Hoyt	Matthew Chalmers Pearce

Doctor of Dental Surgery—Continued

John Jay Perry	Harold Adelbert Stone
Glen Shattuck Phillips	John Herbert Stritch
Frederick William Pratt	Albert Strudel
Albert Protzel	Tracy Beadle Sturdevant
Julius Protzel	Charles William Swing
Lyman Frederiek Randall	Rodolfo Tarasido
Orville Felt Randall	William Tuck
George Henry Reed	Fritz Ernest Turowski
Alberico Dircey de Rezende	Elmer M. Van Dine
Roy Dufford Ribble	Ove Frederick Vibe-Hastrup
Guy Ernest Riechelmann	Slater Rolland Walker
Clyde S. Rine	Chester Hamilton Webber
Eugene Walton Roberts	Charles Smiley Weigester
Thomas Joseph Roche, Jr.	George Ernest White
Felix Alonso Rosado	Louis Edwin White
Mervin Finis Sandman	Daniel Webster Wilbur
Robert Cardwell Shields	William Stanley Wilkinson
Edwin Shoemaker	Joseph Edward Wilson
Harold Sheridan Slocum	Howard Carson Winter
Warren Linwood Smith	Leo Johann Jacob Wipprecht
William Joseph Sparrow	Hamish Cappie Wood
Charles Steffens	Sakuro Yamagata
Alfred Alexander Steiger	Robert John Yeo
David Samuel Stern	Arthur Leon Yetman
	Frank Joseph Younger

Doctor of Veterinary Medicine

Benjamin Myers Beattie	Fred Seymour Klein
Edward Elias Behrens	Louis Phillip Koster
Frederick Boerner, Jr.	Mellis Edgar Kuehner
John Lawrence Boylan	John William Linberg
George Lauer Bushong	Harry Joseph Little
Alfredo C. Carosella	Bernard McGroarty
Barclay Fred Carter	William Vincent McGroarty
John Henry Darrow, Jr.	Hiram M. Michener
Levi Blake Davis	Maurice Howard Milman
Guy Hewitt Dennis	Daniel Sutter Miller
Paul Farrell Devine	Harry Bartle Mitchell
James Thomas Dolan	Ira Mitterling
Harold Nelson Eames	Henry Clayton Moyer
Arnold Andrew Feist	Edward Woodyear Mumma
Michael Patterson Fiedler	Charles Owen Neuhaus
Augustus Milford Fisher	Murray Evan Patrick
James Jeremiah Flaherty	Martha Leroy Quigley
Ross Allen Greenwood	Roscoe Murphey Quigley
Charles Wagner Gwinner	Walter Cameron Reeder
Joseph Edward Haenn	Garrie Wynkoop Riley
Peter James Haley, Jr.	Peter Field Runyon
Malcolm James Harkins	Alvin William Schnell
Norman Theodore Harris	Franklin Folkenroth Shue
William Howard Haskell	Frederick Gustav Steinbach
Julius William Herbott	Frank Whilmore Taylor, Jr.
Moore Bryant Herron	Philip Wendkos
Edgar Carpenter Howell, Jr.	Harvey Grant Werntz
Isaac Harold Kaufman	Henry Bennett Wescott
James Matthew Kingston	Henry Johnson Whiteman

CERTIFICATES, HONORS AND PRIZES**Certificates of Proficiency**

AWARDED BY THE FACULTY OF THE COLLEGE.

IN ARCHITECTURE

Julius Boenisch
 Raymond William Champion
 Rollin Coe Chapin
 Harry T. Cubberley
 William Albert Edwards
 Francis R. Findlay
 Scott Fullerton

Albert B. Gardner
 Robert M. Haas
 Alfred Garey Lambert
 Benjamin Franklin McMurry
 Harold Way Morris
 Gilbert Aloysius Murtagh
 Edwin F. Smith

Walter W. Tompert

IN BIOLOGY

Drury Hinton
 Harry Hapeman Patrie

Joseph Ashbridge Perkins
 John Douglas Perkins, Jr.

Myron Albert Zacks

IN BUSINESS PRACTICE AND BANKING

Everett Henry Eddy

Samuel Wesley Tator

IN MUSIC

Lauretta Belle Cursham
 Joseph Marie
 Helen Anna Raymond

Harriet Lavinia Wilson
 Lilian Regina Wolfe
 Katharine Wolff

IN THE EVENING SCHOOL

John A. Bachman
 Raymond Heber Bailey
 B. Barrington Bacon
 Berlin De Forest Baird
 Louis Herman Bender
 Windom Bryant
 James Lamb Citti
 Joseph Charles Comer
 William E. Cox, Jr.
 Walter P. French
 Royden Jones Griest
 Philip Guckes
 James Hathen
 Charles Frederick Hess
 Clarence Kaeber
 Harry Francis Knapp
 I. Leslie Lawrence
 Howard S. Lewis
 Harry Lurker
 Charles P. McDermott
 John L. McGarvey

Thomas A. McIntyre
 Charles Urben Martin
 H. Warren Mease
 William F. Morris
 Joseph J. Mulvey
 Robert Freeborn Nixon, Jr.
 Harry Carl Nuss
 Joseph Sebastian Rettig
 Albert Robinson
 William Pratt Read Rocap
 Robert Sandberg
 William T. S. Showacre
 Paul Shuman
 George A. Street
 Francis Joseph Sweeney
 Walter S. Townsend
 Joseph Dennis Treacy
 Walton Howard Troyer
 John Gordon Watson
 John William Weeder
 Erwin S. Weiss

V. Eugene Wenger	Walter E. Witte
Franklin Pierce Will	Stephen Greene Woodbury
William Stewart Williams	William August Ziesche
	Claude M. Zimmerman

IN TROPICAL MEDICINE (PARTIAL COURSE)

As of date February 1, 1911:

Harold H. Morris, M.D.	W. J. Wanless, M.D.
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As of date February 1, 1912:

Ira Ayer, M.D.	John Thomas Borden, M.D.
Frank Hynard Edsall, M.D.	Howard Clinton Gibbens, M.D.
Arthur Flournoy Jackson, M.D.	Henry Field Smyth, M.D.

IN PHYSICAL EDUCATION

John Henry Hall	Hugo Kirchner
	Charles Norman Wilkins

Honors

SENIOR HONORS

IN ARTS AND SCIENCE

Carrie Adler	Nellie Welsh Lohr
William Henry Adolph	Morris S. Knebelman
Elsa Wilhelmina Berger	Jessie A. Rodman
Albert Croll Baugh	William Dayton Shelly
Alice Potter Ervin	Jay Wesley Worrall

IN ARCHITECTURE

James Richard Edmunds, Jr.

IN CHEMISTRY

Arnold Kent Balls	Walter Fee Baughman
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IN CIVIL ENGINEERING

Charles Adam Bareuther	S. Sheldon A. Keast
------------------------	---------------------

IN ELECTRICAL ENGINEERING

Willoughby Bainbridge

IN MECHANICAL ENGINEERING

William Allan Sloan

SOPHOMORE HONORS

IN ARTS AND SCIENCE

Rodney T. Bonsall	Morris Flomenhoft
	Archie C. Schock

IN BIOLOGY

Grace Esther Berg
Olive R. Haldeman

Helen Gatchel Row
Mary G. Slaght

IN CIVIL ENGINEERING

Herbert V. Hotchkiss

IN ELECTRICAL ENGINEERING

Albert Paul Godsho

IN WHARTON SCHOOL

Brewster Archibald Ruggles

Prizes

IN THE COLLEGE

I.

FRESHMAN ENTRANCE PRIZES

1. THE EUGENE DELANO PRIZE of fifty dollars for the best special examination in the French and German required for entrance to College. To J. VAUGHN MERRICK.

2. A prize of fifty dollars, offered by THE CLASS OF 1880, for the best special examination in Mathematics by a candidate for admission to the course in Arts and Science. Equally to PAUL J. HOH and CLARENCE V. RIPPLE.

II.

FACULTY PRIZES

1. A prize of thirty dollars for the best Essay in Intellectual and Moral Philosophy by a member of the Senior Class. Subject: *The Principle of Sympathy in English Ethics* (Hume, Adam Smith, John Stuart Mill, Sutherland). To JOHN SETH HEYSE.

2. A prize of ten dollars for the best examination by a member of the Freshman Class on Greek Prose Composition with the Accents. To ROBERT EWING DENGLER.

3. A prize of thirty dollars to a member of the Senior Class for the most meritorious work in the French Language and Literature over and above the regular course. Equally to JOHN ALEXANDER and ISIDORE L. GREENBERG.

4. A first prize of fifteen dollars, and a second prize of ten dollars, for the best examination on the *Lectures on Quaternions* given to a voluntary class. Open to members of the Junior Class, and to members of the Senior

Class who have not previously taken the course. First Prize to FRANK DUFFIELD LYONS; Second Prize to LOUIS ZISLIN.

5. A prize of thirty dollars for the best Essay in History and English Literature by a member of the Senior Class. Subject: *Richard Hakluyt, the Geographer, and His Friends*. To ALBERT C. BAUGH.

6. A prize of twenty-five dollars, to be divided among the best three speakers in the annual Sophomore-Freshman contest in debate, the contest being open to the public. Equally to HOMER R. SULLIVAN, WALTER T. ROBINSON and ALFRED H. WILLIAMS.

7. A first prize of twenty-five dollars, and a second prize of fifteen dollars, for the best and second best preparations illustrating the anatomy of any vegetable. Open only to students in the Biological courses in Botany. First Prize to LEROY W. FREDERICK. Second Prize divided between Miss ACHSAH LIPPINCOTT and WILLIAM C. CHANEY. Honorable mention to ROY L. SCOTT and JAY W. SECHLER.

8. A prize of ten dollars to the member of the Sophomore Class who shall pass the best special examination in sight reading of Latin. Equally to MORRIS FLOMENHOFT and EDWARD WORTHINGTON.

III.

PRIZES FOUNDED BY ORGANIZATIONS

1. A prize founded by the PHI KAPPA SIGMA FRATERNITY in honor of their founder, Samuel Brown Wylie Mitchell, M.D., of the Class of 1852, for the most meritorious work done in the course in English Composition of the second year. It entitles the successful competitor to one year's interest on four hundred dollars. Divided between C. WINTHROP WILLIAMS and REXFORD G. TUGWELL. Honorable mention to GEORGE B. COPELAND and FRED C. ELLS.

2. THE PRIESTLEY CLUB, composed of Alumni of the Chemical Department, offers a prize of twenty dollars each year to that member of the Graduating Class (Post-Senior or Senior, four-year course, Regular or Special), whose work for that year is most satisfactory. To HERBERT HENRY MEYERS.

3. THE PHILADELPHIA GROUP OF THE ALLIANCE FRANÇAISE, established in 1904, awards annually a medal to the student of either the Junior or Senior classes who has done the most meritorious work in French over and above the required courses. To STEPHEN S. SZLAPKA.

4. FACULTY PRIZE IN ARCHITECTURE. The staff of instruction in Architecture will provide and award a medal to that student, candidate this year for the degree in architecture, who shall have attained the highest standing throughout his course. To HARRISON TOWNSEND, JR.

IV.

PRIZES FOUNDED BY INDIVIDUALS

1. A prize, originally founded by the late D. VAN NOSTRAND and generously continued by his business successors, for the member of the Junior Class in Civil Engineering who attains the highest general average of scholarship during the Junior year. The prize consists of twenty-five dollars. To FRANK GEORGE DEKER.

2. THE GEORGE ALLEN MEMORIAL PRIZES, founded by JOSEPH G. ROSENGARTEN, ESQ., of twenty dollars each, are offered to members of the Junior Class taking the Greek and Latin courses as follows: In Greek, for the best examination on the *Oration of Demosthenes on the Crown*, read as an extra subject; and in Latin, for the best examination upon selections from Latin Literature of the Empire (Seneca Rhetor, Quintilian, Pliny the Younger and Suetonius), to be read as an extra subject. Both prizes awarded to MORRISON COMEGYS BOYD.

3. TWO DEBATING PRIZES, established by WILLIAM WEST FRAZIER, JR., a first prize and a second prize, awarded in a public debating contest. First prize \$40.00; second prize \$20.00. First prize to CARROLL B. RHODAS; second prize to FRED. KOSCHWITZ.

4. THE FRAZIER PRIZE.—GEORGE H. FRAZIER, ESQ., of the Class of 1887, offers annually a prize of a standard work in literature, to be chosen by him, and of a value of one hundred dollars, to the student in the College of the University of Pennsylvania, who, being a member of the Football team, Baseball team, Track team, or of the Crew, shall attain the highest standing in scholarship. To EDWARD WALTER MADEIRA.

5. THE ARTHUR SPAYD BROOKE MEMORIAL PRIZE in the School of Architecture, of a cash value of fifty dollars, is awarded annually, in the form of medals, for meritorious work in Design, as follows: for the best record of distinguished rank, a Gold Medal of about forty dollars in value; for records of second and third place and of superior excellence, a Silver and a Bronze Medal, respectively. This prize has been established by MARIA WHARTON BROOKE, as a memorial to her son, ARTHUR SPAYD BROOKE, a graduate in Architecture of the Class of 1897. The Gold Medal to JAMES RICHARD EDMUNDS, JR. The Silver Medal to HOWELL LEWIS SHAY. The Bronze Medal to LEWIS BROSIUS WALTON.

6. THE GEORGE SCHLEICHER PRIZE.—Under the will of the late GEORGE SCHLEICHER, of Philadelphia, the German Society of Pennsylvania holds in trust a fund for maintaining in perpetuity a prize to be named after the testator. This prize is of a value of fifty dollars, and is awarded annually to the best student—of whatever nationality he may be—in the German Language, or German Literature, or both. To HENRY DEXTER LEARNED. A second prize to Miss HILDA LOWE.

7. THE JOHN STEWARDSON MEMORIAL SCHOLARSHIP IN ARCHITECTURE.—The value of this scholarship (established in 1897) is one thousand dollars, and the holder is required to spend one year in travel and in the study of Architecture in Europe under the direction of the Managing Committee. To RUSSELL GRIFFITH HOWARD. First mention (Second Place), DAVID E. LEHMAN. Second mention (Third Place), JOHN FREDERICK HARBESON. Third mention (Fourth Place), EARLE NELSON EDWARDS. Fourth mention (Fifth Place), WILLIAM RICHARD MORTON KEAST.

8. A first prize of fifteen dollars and a second prize of ten dollars offered by JOHN FREDERICK HARBESON, Class of 1910 Architecture, for highest excellence in Course in Historic Ornament. First prize to JULIUS BOENISCH; second prize to MARTIN GUSTAV LINDQUIST.

9. Prize in Electro Chemistry (awarded by JACOB S. GOLDBAUM, '08 C., '10 Ph.D.). To LEON STUART HOLDSTEIN, Ch.

IN THE GRADUATE SCHOOL

FELLOWSHIP AWARDS FOR 1912-1913

ON THE GEORGE LEIB HARRISON FOUNDATION

FELLOWSHIPS FOR RESEARCH

In History:

PAUL VAN BRUNT JONES, A.B., A.M., Ph.D. (Michigan, 1906, 1908; Pennsylvania, 1912).

In Physics:

ENGELHARDT AUGUST ECKHARDT, B.S., Ph.D. (Pennsylvania, 1908, 1912).

In Psychology:

REUEL HULL SYLVESTER, A.B., A.M., Ph.D. (Iowa, 1908, 1909; Pennsylvania, 1912).

In Zoology:

RALPH VARY CHAMBERLIN, B.S., Ph.D. (Utah, 1898; Cornell, 1905).

FELLOWSHIPS

In Astronomy:

WILLIAM ELIJAH ANDERSON, A.B. (Wittenberg College, 1902).

In Botany:

FRANCIS WHITTIER PENNELL, B.S. (Pennsylvania, 1911).

In Chemistry:

HERBERT SPENCER HARNED, A.B., B.S. (Pennsylvania, 1909, 1910).

In Classics:

HORACE WETHERILL WRIGHT, A.B. (Wisconsin, 1908).

In Economics:

RALPH HARRUB BLANCHARD, A.B., A.M. (Dartmouth College, 1911, 1912).

MAYNE S. HOWARD, A.B. (Cornell, 1908).

In English:

WILLIAM SEDDINGER DYE, JR., A.B., A.M. (Pennsylvania, 1905; Pennsylvania State College, 1908).

In Germanics:

GOTTLIEB AUGUSTUS BETZ, A.B., A.M. (Rochester, 1901; Pennsylvania, 1911).

LOUIS BAKER, A.B., A.M. (Lawrence College, 1906; Northwestern, 1908).

In History:

VERNER WINSLOW CRANE, A.B. (Michigan, 1908).

ALBERT KERR HECKEL, A.B., A.M. (Roanoke College, 1903, 1906).

JAMES CLYDE MCGREGOR, A.B., A.M. (Washington and Jefferson College, 1905, 1908).

FRANK EDGAR MELVIN, A.B., A.M. (Kansas, 1906, 1909).

In Indo-European Philology:

HENRY SNYDER GEHMAN, A.B., A.M. (Franklin and Marshall College, 1909, 1911).

In Philosophy:

LUCIUS WALTER ELDER, A.B., A.M. (Michigan, 1905, 1909).

In Political Science:

PAUL HENRY CLEMENTS, A.B. (Indiana, 1911).

In Psychology:

DAVID MITCHELL, A.B., A.M. (Toronto, 1910; Pennsylvania, 1911).

In Romanics:

WILLIAM H. SCHEIFLEY, A.B., A.M. (Indiana, 1901, 1903).

In Semitics:

EDWARD CHIERA, A.M. (Pennsylvania, 1911).

ABRAHAM SIMON, A.B., A.M. (Harvard, 1910; Pennsylvania, 1911).

In Sociology:

JOSEPH HENRY WILLITS, A.B. (Swarthmore College, 1911).

In Zoology:

ROBERT HARRIS HUTCHINSON, A.B. (Lafayette College, 1909).

SCHOLARSHIPS

In Chemistry:

WILLIAM HENRY ADOLPH, A.B. (Pennsylvania, 1912).

In Classics:

RODGER F. GEPHART, A.B. (Swarthmore College, 1910).

In Economics:

DAVID SCOTT HANSCHETT, A.B. (Wisconsin, 1910).

In English:

ALBERT CROLL BAUGH, A.B. (Pennsylvania, 1912).

WALTER HENDRICKS RENNER TRUMBAUER, B.S. (Pennsylvania, 1912).

In History:

GEORGE BORN MANHART, A.B. (Susquehanna, 1910).

In Mathematics:

LOUIS JOSEPH ROUSE, A.B. (Princeton, 1908).

In Philosophy:

LAWRENCE LADD BUERMAYER, A.B. (Pennsylvania, 1912).

In Botany:

GUY ELMORE ALBERT, B.S. (Pennsylvania, 1912).

UNIVERSITY RESEARCH FELLOWSHIPS

In Indo-European Philology:

EUGENE WATSON BURLINGAME, A.B., A.M., Ph.D. (Yale, 1898, 1902; Pennsylvania, 1910).

In Philosophy:

EDWIN RAY GUTHRIE, JR., A.B., Ph.D. (Nebraska, 1907; Pennsylvania, 1912).

In Romanics:

S. L. MILLARD ROSENBERG, B.S., A.M., Ph.D. (Pennsylvania, 1907, 1908, 1909).

ON THE JOHN FRIES FRAZER FOUNDATION

Fellowship in Physics:

ANCEL ST. JOHN, Ph.B. (Rochester, 1906).

ON THE HECTOR TYNDALE FOUNDATION

Fellowship in Physics:

THOMAS DARLINGTON COPE, A.B. (Pennsylvania, 1903).

ON THE JOSEPH M. BENNETT FOUNDATION.

*FELLOWSHIPS**In Classics:*

ETHEL HAMPSON BREWSTER, A.B., A.M. (Swarthmore College, 1907; Pennsylvania, 1911).

In History:

HENRIETTA SILVIS ADDITON, A.B., A.M. (Piedmont College, 1907; Pennsylvania, 1911).

In Germanics:

BEATRICE MARGUERITE VICTORY, A.B., A.M. (Swarthmore College, 1907, 1908).

In Mathematics:

LENNIE PHOEBE COPELAND, B.S., A.M. (Maine, 1904; Wellesley College, 1911).

ON THE MRS. BLOOMFIELD MOORE FOUNDATION

*FELLOWSHIPS**In Political Science:*

LEAH RACHEL CLARA YOFFIE, A.B. (Washington, 1911).

In Sociology:

ESTHER LOUISE LITTLE, A.B., A.M. (Smith College, 1903; Pennsylvania, 1912).

ON THE FRANCES SERGEANT PEPPER FOUNDATION.

Fellowship in Classics:

LIZZIE SIKES JAMES, A.B., A.M. (Swarthmore College, 1908; Pennsylvania, 1911).

ON THE FRANCES E. BENNETT MEMORIAL FOUNDATION.

Scholarship in English:

MATILDA EMILY DAW, student, Cornell, 1906 and 1907; Pennsylvania, 1910-11.

DEUTSCHE VEREIN TRAVELING SCHOLARSHIP.

In Germanics:

WILLIAM FREEMAN HOFFMAN, Ph.B. (Franklin and Marshall College, 1911).

ALLIANCE FRANÇAISE TRAVELING SCHOLARSHIP.

In Romanics:

JAMES WHITE CROWELL, B.S., A.M. (Haverford College, 1909, 1911).

UNIVERSITY SCHOLARSHIPS.

Thirty University Scholarships have also been awarded.

THE MITCHELL PRIZE IN ASTRONOMY.

This prize has been established by the generosity of Mrs. Charles L. Mitchell, of Philadelphia. It consists of the sum of fifty dollars in gold, to be awarded annually to the student in Astronomy whose work during the year has been the most meritorious. To WILLIAM ELIJAH ANDERSON.

IN THE LAW SCHOOL

THE P. PEMBERTON MORRIS PRIZE, for the best written examination in Evidence, Pleading, and Practice at Law and Equity. To WILLIAM ABRAHAM SCHNADER, with Honorable Mention to FREDERICK LYMAN BALLARD.

The following is a list of the third year men who are entitled to honors for their third year work:

FREDERICK LYMAN BALLARD	IGNATIUS ALOYSIUS QUINN
EVERETT HENRY BROWN, JR.	WILLIAM ABRAHAM SCHNADER
CHARLES LICHTY MILLER	WILTON WELLS WEBSTER
ROBERT BELVILLE WOODBURY	

The following men are entitled to graduate *cum laude*:

FREDERICK LYMAN BALLARD	CHARLES LICHTY MILLER
EVERETT HENRY BROWN, JR.	WILLIAM ABRAHAM SCHNADER
ROBERT BELVILLE WOODBURY	

IN THE SCHOOL OF MEDICINE

THE ALUMNI MEDAL awarded to the member of the Graduating Class who attains the highest general average in examination. To G. K. STRODE.

THE DR. SPENCER MORRIS PRIZE.—The annual income derived from the investment of Ten Thousand Dollars, awarded each year to that Medical Student of the Graduating Class who shall pass the best examination for the degree of Doctor of Medicine. To G. K. STRODE.

THE FREDERICK A. PACKARD PRIZE of One Hundred Dollars, offered by a friend of the University to the member of the Graduating Class who has proven himself to be the most proficient in the course in Clinical Medicine. To E. S. FISH.

The prize offered by the Professor of Obstetrics to the member of the Graduating Class who furnishes the best report of a case in Obstetrics occurring in the University Maternity Hospital. To E. H. BEDROSSIAN.

IN THE VETERINARY SCHOOL

THE J. B. LIPPINCOTT PRIZE of One Hundred Dollars is offered to the member of the Graduating Class who, in the three years spent in the Veterinary School of the University, attains the highest general average in examinations. To IRA MITTERLING.

A Prize of a veterinary instrument is offered by a friend of the School to the member of the Second-year Class who passes the best examination in Veterinary Anatomy. To HARRY BECKER BALTHASER.

GRADUATION SERMON

The Rev. Robert Johnston, Rector of the Protestant Episcopal Church of the Saviour, Thirty-eighth and Ludlow Streets, made a stirring appeal to the graduating classes of the University of Pennsylvania in the baccalaureate sermon on Sunday morning, June 16. The church was completely filled with friends of the University and of the graduates. The students assembled outside the building. Headed by Provost Edgar F. Smith, Vice-Provost Josiah H. Penniman, the Deans of all the departments, and Trustees, the academic procession marched into the body of the church. During the march the chimes in the tower played the University hymn, "Hail, Pennsylvania."

Mr. Johnston used as his text: "Lord, open the eyes of this young man that he may see." He said, in part:

"Each graduating class of every university should contain the embryo of the greatest need of the world—a man. The crying need of the world is men. The world is in travail and will endure the agonizing pains until the son is born who will redeem it from mediocrity, from superficiality, gold-lust, idolatry of spurious success, timidity, fear, servility, from the shadows of a gold-veneered plutocracy, which is thrusting its impudent face even into the Church. This son will rescue us from our present perilous position.

"The saviour of this country may be in West Point, or in Annapolis, but it is in our universities we have the greatest right to expect the leader—the Moses, the Elijah, the Baptist.

"The last thirty years have shown in this great country the dreams of gold and worldly prosperity, which were only possible through the dreams of romanticists. It is cheap policy to sneer at gold; gold is the character of the material world—the sacrament of power. But when men make gold the goal—when the means become the end, when the counters which register success, become the curse of character, when souls are atrophied, when truth is set aside, when the patient search in the laboratories or the sciences of the study are lightly esteemed, then we must

pray the Lord to open the eyes of men that they may see. God Almighty save us when 'success' is bought by approval of the world, obedience to worldly standards, loyalty to an organization, or conformity to things as they are.

"Pennsylvania can supply the world's great need. Let her produce the spirit that is, or ought to be, its distinctive quality—that quality which made William Penn what he was, and made the state and city what they now are. Let religion rule; let a prophet arise; let a seer appear, and the glory of this latter age will far transcend the glories of the past.

"The greatest need of our time is men. Men who are not slaves; free, not servile; free from self, fear, vanity and jealousy, freemen walking in the liberty wherewith Christ has made us free. Men who are obedient to no codes, to no organization; men who are dependent upon none, insolent to none, servile to none—casting down traditions, doctrines and idols; fearing nothing, loving nothing save God, the Eternal. Such a man lifts up his eyes to the hills and, ignoring the presence of the enemy at the gate, sees the spiritual presences and declares to a bewildered generation afflicted with shortness of sight that the forces of God fill the horizon; that the noisy servants of Satan are weak beyond compare; that 'they that are with us are more than they that are against us.'

"Let Pennsylvania produce such a man and the glory of one of her sons will be the glory of the world beyond her gates."

CONFERRING OF HONORARY DEGREES

By the Provost

EDWARD ROBINS: Writer of biography—writer of fiction—writer of art and musical criticism, whose sketches, delighting young and old, have brought sunshine and wholesome, uplifting thoughts into many homes.

GEORGE WOOLSEY HODGE: Theologian by education—preacher by choice—whose life work has fallen among the people—exemplar of the legend—

“Live truly and thy life shall be
A great and noble creed!”

JOSEPH SWAIN: President of Swarthmore College—mathematician—biologist—educator, whose contributions to three fields of endeavor have won you high position and honorable distinction in the realms of science and general literature.

LOUIS ADOLPHUS DUHRING: Whose name is indissolubly connected with research in dermatology—whose books have appeared in many languages—whose place among men of medicine has long been in the first rank—“a guide to the high white star of truth!”

JAMES TYSON: Teacher, superb and revered—physician, true and tried—

“Looking back across your busy years,
You know what your skill has spared of pain and tears.”

JOHN GRIER HIBBEN: Son of “Old Nassau”—to-day, its leader—loyally upholding its traditions—sturdily following in the footsteps of a long line of consecrated and learned Presidents,—yet, laboring independently in the domain of logic and pure philosophy, winning renown, credit and fame as scholar, investigator and wise executive.

JOHN CADWALADER: Whose name recalls men famous in the annals of our University and our country—patriots, statesmen, scholars—a noble heritage, splendidly personified in the fifth generation by you in your private, public and professional life—crowned with honors for conspicuous, courageous service; for unselfish devotion to country; for all that marks the true scholar and Christian gentleman. After fifty years Alma Mater, for the second time, extends her approving hand in appreciation of your high attainments and great achievements, and bids me as Provost confer upon you, etc.

PRESENTATION OF PORTRAITS

Provost Edgar F. Smith's Portrait

BY GEORGE A. HUGGINS

We, the members of the Class of 1902 College, are assembled together to-day to celebrate the tenth anniversary of our graduation. It is a happy day to us because we are renewing our old associations and friendships.

It is our desire to present to the University a memorial of this occasion, but in striving to honor the University we have ourselves been honored, for our revered Provost, Edgar Fahs Smith, had consented to sit for this portrait by the well-known artist, Hugh H. Breckenridge.

We ask you to receive this portrait because we wish to pay tribute to a man whose influence on the University and her sons has been so far-reaching and so powerful that it will be felt by future generations of University men long after he has left us. He is to all Pennsylvania men, whether students or alumni, teacher, counsellor and friend.

It is an especial pleasure to present the portrait through you, Dr. Harrison, because you have been our adviser and friend in this matter; in fact, had it not been for your kindly insistence that it was one of Dr. Smith's duties as Provost he might never have consented to sit for the portrait. As a matter of fact, even at that it took us just one year to gain his consent.

And now, in behalf of the Class of 1902 College, I present to

you for the Trustees of the University, as a memorial of our tenth anniversary celebration, this portrait of Provost Edgar Fahs Smith.

Dr. Charles C. Harrison Receives the Portrait

On behalf of the Trustees of the University of Pennsylvania, I gratefully accept from the Class of 1902 College this portrait of the Provost.

It is true that we have had some difficulty in thus bringing our Provost into prominence, but that is always a difficulty hard to overcome.

If it be quite agreeable to you, it is my wish to accept the portrait not only as a Trustee of the University and upon behalf of the Board of Trustees, but also as a member of the Class of '62 College, which now celebrates its fiftieth anniversary and extends to the Class of 1902 College and to the Classes of all Departments of 1912, this day graduated, a greeting of affection and good will.

It fell to my lot to become a Trustee of "Pennsylvania" in 1876, a few months before Provost Smith entered the services of the University, in September of the same year. With the exception of seven years of instruction elsewhere, Provost Smith has been with us at "Pennsylvania" for nearly twenty-nine years.

There are many colors in which the likeness of this unusual man may be portrayed and the sources of his power traced. For myself, from a long intimate association, it seems to me that the secret of his power lies in the fact that he believes that there is enough of good in the human nature of every man to direct that man aright, and in this search every effort of his daily life has been directed. Is it any wonder that he has become known to all students and to every alumnus of this University, and is beloved by one and all, beyond the affection heretofore enjoyed by any of the twelve preceding Provosts of the University? So that, in your words of presentation, you well call the Provost your teacher, counselor and friend.

I asked the Provost a few days ago, in lighter vein, whether he would not himself write such words of acceptance as he might prefer, and, with a smile, the Provost suggested that I speak of him as a "financier." To the great majority he would be considered a failure as a financier, for he never has anything of this

world's goods to his credit, either in the banks or elsewhere. But to him who believes it to be true that what one gives away one has, and that what one keeps he loses, Dr. Smith is the first of financiers. "Poor himself, he maketh many rich, and having nothing he yet possesseth all things."

I like to think of him also as the historian of the University, knowing better than any other her colonial and national tradition and pedigree. I like to think of him as the teacher, giving unnumbered hours, both in class-room and out of class-room, to all those to whom he may be a teacher. And I believe in his creed, a creed which follows much practice and little preaching, and is best expressed in the simple lines which he himself loves to repeat:

"A willing kindness,
A ready trust;
A bit of blindness
To moth and rust.

"A balm of laughter
For anger's heat;
A brave heart after
A sore defeat.

"A glad hope, cleaving
To each new day;
A patience, leaving
No stony way.

"A warm faith, summing
All life worth while—
Yet, at death's coming,
A fearless smile."

I accept this portrait of our Provost in every relation to which I have thus briefly referred,—as friend, as counselor, as teacher, as financier, as philosopher, as historian, as minister amongst us all.

Professor Henry W. Spangler's Portrait

BY OTTO C. WOLF

Ladies and Gentlemen, Members of the Board of Trustees and Honored Provost:—It is with keen emotion that I address you in the name of the graduates and students of our beloved

Alma Mater, who have had the benefits, as well as the honor, of participating in the instructions given in the Department of Mechanical Engineering, and who, through me, wish to express their gratitude, their love, and their profound obligation to the late Henry Wilson Spangler, Professor of Dynamical Engineering and head of the Mechanical and Electrical Engineering Department of the Towne Scientific School, whom they hold in sacred and most grateful memory.

I feel assured that when the general scope of the University was enlarged (in 1872) by the addition of the various Engineering courses, it was hardly expected that the growth of these departments would be so rapid, and prove to be of such importance, as time has shown them to be. Naturally, as is true of all great growths, the beginning was but meagre; and it is when we realize the wonderful development of the Engineering Department, when we compare the number of students in the early classes with those of the present (a comparison of about two hundred with nearly eight hundred), that we must appreciate the masterly work of the teaching staff, and the great efforts of our honored Provosts, both past and present, of the worthy head of the Department of Civil Engineering, Professor Edgar Marburg, and of our deceased and lamented friend, Professor Henry Wilson Spangler.

The subject of our demonstration to-day, Henry Wilson Spangler, was born at Carlisle, Pa., in January, 1858. He was graduated, with high honors, as Cadet Engineer from the United States Naval Academy at Annapolis, in 1878, at the age of 20. After graduation he was attached as Assistant Engineer to the U. S. Navy from 1878 to 1889, although serving, on detached service, on the faculty of our University as Assistant Professor of Mechanical Engineering from 1881 to 1884, and again from 1887 to 1889.

In the following year, 1890, he was elected to full professorship as "Whitney Professor of Dynamical Engineering," which honored position he held until the time of his death, and thus giving to our University twenty-six years of faithful and invaluable service.

The talents of Professor Spangler as author, teacher and organizer, won for him the esteem and affection of his fellow professors and of his classes as well. He found the Engineering Department

limited, practically, to two rooms in the old College Hall, and with only about two hundred students; at the time of his death the Engineering Department occupied one of the largest and best equipped buildings in the University domain, and peopled by loyal and enthusiastic students numbering nearly eight hundred, and each student in full appreciation of the thoroughness of the course, and attached by the strongest bonds of affection to the head of the Department.

It is this loyal body of students and graduates who express, through me, their deep appreciation and love for their departed mentor and teacher, and who request the honorable Board of Trustees to accept an oil painting of their cherished Professor and friend, and to carefully house it in the halls of the Engineering Building, so that all posterity, and particularly all future students, may see that the calling of a teacher has a reward more enduring than the financial returns of commercial life—a reward that can only be given by the promptings of admiration and affection—a deep-seated love of man for man that will endure for all time and under all circumstances.

Mr. Arthur L. Church Receives the Portrait

It is with satisfaction and pleasure that I accept, on behalf of the Board of Trustees, the portrait from the Henry Wilson Spangler Memorial Committee. Professor Spangler was a truly great teacher, a lucid writer, an able and progressive engineer, an organizer and executive of conspicuous ability.

Though practical in all things, he was a dreamer of dreams which, with splendid energy, he vitalized into realities. From the humblest of beginnings he brought his department of Engineering to a high degree of perfection and prosperity; and died lamenting that it had not been even better done. In the design and conduct of the Heat and Light Station he was responsible for twenty years for the safety and comfort of the whole University family, without even a minor accident. Devotion to duty was an article of faith with him. The daily task simply done, well done, was its own reward.

He was the brotherly counselor of every student under his care. Rigid, even austere in discipline, nothing could be more admirable than his tender, continuous interest in the welfare of

his students. Nothing was more noteworthy in his career than the warm affection in which they held him as they came to know and understand him.

A shining example of thoroughness, honesty and manliness, the wholesome influence of his teachings will be felt for a generation and more. Who can say to what point of time the inspiration of such a character will extend?

I am sure that as this portrait hangs in the hall of the Engineering Building there are hundreds who will pause before it in silent, reverent regard for the memory of him who was, first and last, their friend and well-wisher.

Dr. Joseph Leidy's Portrait

BY DR. GEORGE A. PIERSOL

In these days, when the opportunities for adequate training in the Biological Sciences are so generously provided by our great institutions of learning, it is difficult to realize the obstacles overcome by those pioneers who blazed the trail for American Science during the early half of the last century.

Sixty-eight years ago, there graduated from the Medical School of the University of Pennsylvania a young man, Joseph Leidy by name, whose thesis, on the "Comparative Anatomy of the Eye of Vertebrated Animals," indicated his interest in the broader phases of anatomical science.

Born in Philadelphia in 1823, even as a boy Dr. Leidy manifested the keenest interest in all natural objects. This passion for nature-study dominated his life-long devotion to science with no thought of personal ambition, but simply for the joy of unraveling some of the many mysteries about him.

Dr. Leidy's genius for accurate observation was far too active to be content within the limits of a single field, for he read from Nature's book wherever opened. The rocks of the mountain-side and the flowers of the valley were to him equally attractive. Whether he reanimated the fauna of remote epochs with the monsters whose fossiliferous remains were carried to him from the

far West, or pictured the beautiful forms of the microscopic life of our fresh-water ponds, Leidy's trained eye and skilful pencil made and recorded discoveries which will stand for all time.

The six hundred scientific papers which he published touched upon almost every important subject within the wide range of natural history, and Leidy's fame as a comparative anatomist, paleontologist, zoologist, parasitologist, botanist and geologist was confined neither to his city nor his country, but was world-wide.

Dr. Leidy's more immediate relations with the Medical School of the University of Pennsylvania began with his appointment as prosector, in 1845, and continued for almost a half a century. In 1853, when only thirty years of age, he became Professor of Anatomy, a position which he held for thirty-eight years, and made lustrous by the reflection of his own reputation as one of the world's great naturalists.

Although an excellent teacher of human anatomy, Dr. Leidy's interests were too broad to permit him to study man in any other light than as the highest member of the great animal-family. It was, indeed, as the able expounder of the fundamental truth of Organic Evolution—a truth then regarded by many as rank heresy—that Leidy exerted his greatest influence, and to him many a student owed his first adequate conception of man's true place in nature. It is of more than passing interest to note that, in an address to the Medical classes, given just six months before the appearance of the "*Origin of Species*," Dr. Leidy expressed views in many ways similar to those held by Darwin.

In 1884, Dr. Leidy extended his service to the University by assuming the directorship of the Biological School, then just established largely through his influence.

The Zoological Department has twice been deprived of its director by death. The last of these misfortunes still casts its shadow over the entire institution, for in the untimely death of Dr. Thomas H. Montgomery, Jr., the University has lost a capable and faithful teacher and a distinguished investigator, while his associates mourn the friend whose personal qualities endeared him to colleague and pupil.

On behalf of many admirers of Dr. Leidy, some of whom have enjoyed the privilege of being his pupil and friend, I have

the honor of presenting this portrait of one of the greatest of Pennsylvania's sons. The donors ask that it be given place within the new home of the Zoological Department, that the kindly face of the master, in the full vigor of manhood, may become familiar to future generations.

May the example of his untiring industry and unswerving loyalty to accuracy and truth be an inspiration to those who, following his ideals, are unselfishly seeking knowledge.

Dr. J. William White Receives the Portrait

Dr. Joseph Leidy, officially Professor of Anatomy in the University of Pennsylvania, was one of the great scientists of the world. His attainments in geology, mineralogy, biology, paleontology, and comparative anatomy, altogether overshadowed his work in relation to medicine, although his text-book on Human Anatomy was for many years the clearest and most concise presentation of the subject available for American medical students; and his discovery of the trichina (in 1848) was a momentous addition to medical science. That in so many branches of natural science he was recognized as a pioneer, an original thinker and observer—in fact, as a master—by the learned societies of this country and of Europe, conferred throughout his life distinction upon the University and upon Philadelphia. His reputation broadened and strengthened up to the time of his death. Much of his work was highly technical and could not be briefly described, but it should not be forgotten that a month before the publication of Darwin's immortal "Origin of Species" (November, 1859), Dr. Leidy, in his introductory lecture to the Medical Class of this University, clearly outlined the problem involved and suggested the possible common origin of all the species of organized beings. His knowledge of Nature was encyclopedic in its scope and microscopic in its detail. He was among the earliest to reconstitute an entire animal from a bone or tooth, or fragment of the skeleton, and the accuracy of his work in this direction was invariably confirmed whenever later discoveries followed. He would not have claimed to be a botanist, but he was as familiar with plant as with animal life. He was not a physicist or a chemist, but whenever those sciences touched biology he showed a practical

acquaintance with their fundamental truths. He was truly a great man, perhaps more worthy—from the scientific standpoint—to be classed with Benjamin Franklin than any other of our long list of distinguished teachers and alumni.

As to his personal qualities, he was like Agassiz and Agnew and Lister, whose names with his could not possibly be omitted from the roll of the great men of the nineteenth century, and whom I have had the good fortune to number among my friends. Two were surgeons and two were devotees of pure science, but a description of one applies equally to all. Leidy, like the others, was simple and unaffected in his manners, kind and courteous in his treatment of every one without regard to social conditions; slow to take and even slower to give offense; broad in all his views of life and its complex relations; modest to the point of diffidence where his own merits were concerned; ready to give freely and earnestly from his overflowing stores to the humblest seeker after knowledge; earnest and sincere without being quarrelsome; and good with no shadow of self-righteousness.

My father, in an obituary memoir of Dr. Leidy, expressed as follows the sentiments of the University alumni who had known and loved him: "Appreciation of his rare intellectual gifts was forgotten in admiration of his sincere, sweet-tempered, loving nature. Retiring and unassuming; genial and kindly in spirit and manner, the friend of all, the enemy of none; as approachable as a child, ready at all times and with evident pleasure to give the benefit of his knowledge to all who sought it, his death will be mourned wherever science is valued throughout the earth; but we especially will miss his kindly face, his ready hand, his cordial greeting, and his noble example of industry, integrity and manly character."

I accept, with much pleasure, on behalf of the Trustees, this admirable portrait of Professor Leidy.

INTRODUCTION BY THE PROVOST

The Governor of Maryland, who was to have been the orator, has been suddenly called by unexpected official duties to a distant part of the country. We, therefore, invited a friend, who has graciously consented to deliver the Commencement address. I have the honor to present President Joseph Swain of Swarthmore College—the orator of the day.

COMMENCEMENT ORATION

By Joseph Swain, LL.D., President of Swarthmore College

PRIVILEGES AND DUTIES OF AMERICAN CITIZENSHIP

Members of the Faculty, Honorable Board of Trustees, Members of the Graduating Class, Ladies and Gentlemen:

I wish to express my great appreciation of the high honor you bestow on me, Mr. Provost, in asking me to address the graduating class of the University of Pennsylvania to-day. The Quaker College at Swarthmore sends cordial greetings and goodwill to the great University.

It was my privilege to spend several months during the past college year in Europe. While I have been abroad a half dozen times before, a whole year at one time in my student days, I was never so impressed before with the privileges we enjoy in America, and I desire to briefly give expression to this feeling of satisfaction and sense of obligation which our opportunities place upon us. Let me first, however, say a word concerning foreign advantages. The older countries of Europe have through centuries accumulated many things in many ways which only the older countries can have. They have gained knowledge and experience by which we need to profit. The great attractions of Europe are relatively near together because the countries are relatively small. We are all familiar with the treasures of art and literature to be found abroad.

There is not a leading nation in Europe but has something from which we can learn. But America is the country of opportunity, and we need to realize both our blessings and our obligations. America is indeed the land of golden opportunity, and we see this the better by comparison with foreign conditions. I may illustrate our opportunities here in one way by the abundance of our territory compared with Germany. Germany to-day is considered the great and rising power of the continent of Europe, and the other powers watch her movements with a jealous eye. She has grown in population since the Franco-Prussian War, in a period of forty years, from about forty million people to over sixty million. The number of her people is growing at a rapid rate. She finds that she has not sufficient territory to provide for her population. While England and America and other nations were enlarging their territory, Germany was busy uniting her empire. Germany now has very limited opportunity for colonization except by conquest. It was said that Germany, in sending her war vessels last July to the Atlantic Coast of Morocco, was avowedly looking after the safety of German subjects in Morocco, but the fear of war that prevailed throughout Europe was on the supposition that Germany was determined to acquire additional territory for colonization in Africa, even if she had to secure it by fighting for it. A visitor to Germany, in talking to the people, soon learns what a pressing question in the minds of Germans additional territory is. They feel that more land is a necessity, and necessity, like hunger, knows no law.

It is much easier for an American with comparatively unlimited territory to believe in a speedy disarmament than for a German, and the pursuits of peace may be followed with much more equanimity here than there. Again, among the many things for which our American citizenship should be most grateful is its comparative freedom from abject poverty. We have the indolent, the unfortunate, the weak, and the poor, but we do not find here such hopeless conditions of want and degradation as we find in many parts of Europe. Huddled together as they are in crowded cities, often thousands living in dark and damp alleys where the rays of the sun never penetrate, where pure air never enters, and where there seems neither power nor possibility for the inhabitants of these dismal quarters to better their conditions. Such

surroundings not only weaken the body and enfeeble the mind, but make the moral atmosphere of the lowest kind. The environment of the slums is often the occasion, if not the cause, of much degradation and crime. Better moral conditions demand first better physical environment. Booker T. Washington is right in his theory of the development of his race, that habits of industry and thrift and a higher plane of physical life must precede intellectual and moral uplift. While material resources alone will never make a great and happy nation, and may be the occasion of its downfall, adequate supply of clothing, food and shelter are of fundamental importance, and in many parts of the old world these things are lacking to an extent which leads to untold physical, intellectual, and moral degradation. The mere struggle for existence among the lower classes in the old world is much more severe than in the new. Caste, unjust laws, long years of oppression, crowded conditions of the people, life under unhealthful and unwholesome conditions, have made the lives of the poor pitiable indeed. In our land the industrious and healthy man or woman need never lack for the necessities of life. This is a blessing the full meaning of which is not realized by many of us.

The crowded conditions of Europe everywhere make one feel that America should not close her doors to the European immigrant. We should have carefully planned immigration laws to make sure that foreigners coming to this country will become naturalized citizens. It is necessary, however, that we shall see that Europeans coming to this country shall be Americanized and not permit any portion of America to be Europeanized, but, under proper restrictions and regulations, let there be an open door in this country for the oppressed and overcrowded in other lands. The humanitarian spirit demands that the door of opportunity shall not be closed to those who would become citizens and live up to the standards of American citizens.

One who has not traveled in any country except our own cannot fully realize how much better the condition of woman is in America above that of other countries. The European woman is too often either a doll or a drudge. Everywhere in the old world you see women working on the streets and in the fields, doing the work which we regard that of men. They carry great loads on their backs, serve as porters, hoe in the fields, unload

coal and shovel snow on the streets in winter. It is a common thing to see a woman and a dog pulling a cart together. In the higher walks of life, in aristocratic circles, young women at least are guarded so closely that they have little contact with life and grow up, as it were, in a convent. American women and American men also may well rejoice in the greater freedom and greater equality of the American woman. If the American man has greater opportunity than the men of other countries, the American woman has far greater advantages, especially far greater independence, and is held in much greater respect and esteem.

There is greater freedom in America than in other parts of the world. The individual being is given greater consideration. Even in a democracy like France there are monarchical traditions, and a considerable portion of the people who wish to see a return to ancient conditions. The idea of caste is in no sense eliminated in that country. A monarchical form of government brings with it inevitably also aristocracy. Where there are caste lines there can be no sense of equality of opportunity. There is a conviction that birth alone makes one man better than another, regardless of attainment or character. There is no other country in the world where the worth of the individual human being, regardless of birth, wealth, or position, counts for so much as in America. We may well be grateful for the democratic spirit of our forefathers which they implanted in our American nation. Let us do our part to preserve and enrich this spirit.

Again the United States has much cause for gratitude that it is a union of states,—a nation one and indivisible, under one flag, with a common aim and purpose, one people speaking a common language, and comparatively free from sectionalism. Few nations of the earth are so favored. Take, for example, the Austrian empire. The government is very unstable. In Bohemia a majority of the people speak the Czech language. They are not in sympathy with the government of the empire, which is German. The feeling between the Germans and the Bohemians in Prague, the ancient capital of Bohemia, is so strong that the University of Prague, established in 1346, the oldest of German universities, had to be divided into two universities, one for the Germans and one for Bohemians, the latter being much the larger. These separate universities now have plants of their own in differ-

ent parts of Prague, and are conducted wholly independently of each other. Thus in Prague there are many more students who are unfriendly to the government of the empire than are friendly to it. This feeling of hostility between peoples under the same government is extended to every activity in life. We attended a concert in Prague where Americans, Germans, and Czechs were on the program. They listened with interest to the American singer, but several families of one faction were noticed to go out before a famous singer of the other performed her part in the program. The prejudice was not personal, but racial. Baron Plener, a member of the Austrian Senate, told me that the Austrian government had to deal within the Empire with peoples speaking twenty-six different languages. In view of their past history, these conditions make jealousy and lack of co-operation inevitable.

It is only by such comparisons as those given above that we in America can realize how relatively simple our isolation from other nations makes the problem of our government. The statesmen of a country like Austria have not only the tremendous complex question of keeping the peace at home, but their country is threatened by unfriendly powers all about her. By our geographical and racial conditions we are relatively free from all this.

"The American union extends over nearly a whole continent. Its origin was the common struggle of several English colonies—now states—for their emancipation; unity of purpose was the main principle of their common growth, union was its natural result.

"Once a fearful crisis shook that principle and threatened it with destruction. The crisis came to a speedy termination. * * * The original principle, the principle of unity, triumphed because it was the original one, the vital one. Europe, on the other hand, is in her origin and in her present state, a compound of conflicting interests and struggling potentialities."

We may well be grateful that we are not a military nation. The continent of Europe is ever guarded by the soldier. You see him on every hand in Germany. There are many agencies to keep alive the military spirit. One of these is the Navy League. When it was determined in 1898 by a few leaders that Germany should largely increase its navy, it was seen that the heart of the German people must be in some way led to believe that a big

navy was necessary for the defense of the fatherland. For this purpose a few military men and others in sympathy with them organized the Navy League. That body grew in numbers until now it consists of about a million men. This league has agitated the question of increasing the navy in a multitude of ways. They have held public meetings, they have had military programs in the schools, they have sent the children in great excursions to the seacoast, where they could see the war fleet. They have raised about a quarter of a million of money each year with which to conduct their campaign through the papers, in circulars and in many other ways. As a result, the program in the Reichstag of a great navy has been carried through, and Germany, a nation that formerly had a very small navy, now has one of the largest in the world.

One feels at once in Germany that the highest idea of the nation is military. Even the spirit of the schools is military. Unless the political philosophy of Europe that commercial and social power is determined by the strength of the army and navy can be replaced by reason and moral law, there seems no end but destruction and ruin. While America is spending large sums of money on her army and navy, she is spending relatively much less than Europe. I for one would be glad to see her take a more conservative position. But America is not a warlike country. A great body of her people have nothing to do with the army and navy, and most of our people rarely, if ever, see them.

Again we have in the United States a feeling of patriotism and fidelity to our democratic form of government, because we believe in principles of democracy and know that we have a stable government. The recent change to a democratic form of government in Portugal furnishes a forceful illustration of the lack of this patriotism and loyalty in at least two hundred thousand of her subjects. On a recent journey from Gibraltar to New York, we stopped for a few hours at the Islands of the Azores, which belong to Portugal. For some time during the struggle in the mother country the islands were entirely cut off from communication with the mainland. The inhabitants of the islands were entirely ignorant of what had happened. The first information they had was an order sent from Portugal to give up allegiance to the old government and swear allegiance to the new. The

people were called together at San Michael, the most important place of the Azores. The old flag was hauled down and the new flag of the republic was pulled up. An American at the Azores was an eye-witness of the scene, and he told me that the people were so passive that there was not as much demonstration by the two hundred thousand people of the islands as there would be by half a dozen American college boys at a football game. The American had expected to see tremendous excitement, and even bloodshed. Instead he found the indifference hardly conceivable. Imagine, if you can, in peaceful Philadelphia, a representative of the United States Government calling this community together and, without previous warning, and with no knowledge of changed conditions on the part of the people, ordering that you haul down the Stars and Stripes and put in its place a new flag of which you knew nothing, and when you had nothing whatever to do in making it your flag! After the scene in the Azores, the American went to the Governor and said to him that he was astonished that a change so important and so far-reaching could be made without question or protest, or, if approved, without demonstration. The Governor replied: "Why not? The old government was as bad as it could be; the new cannot be worse." While our own government is yet far from ideal, in the face of an illusion like this, we may indeed be grateful that we have a stable democratic form of government in whose basic principles we believe and which it behooves us to uphold by an enlightened and courageous citizenship.

An American diplomat who has spent many years abroad in different countries told me he was sure that the moral sense of the American people is higher than of any other people in the world. I heard ex-President Eliot of Harvard once say, in answer to a charge that the American people were materialists, that he did not think so. He thought rather that they are idealistic. I believe President Eliot is right, but we are so busy most of the time that we do not give our idealism a fair chance. A foreigner in our country is likely to hear the worst side first. The American Indian takes first and most easily to the vices of the white man. In a similar way the American in foreign countries hears first of the vices of the people. Perhaps this is partly due to the fact that vice is bolder and more noisy than virtue, and perhaps it

is partly due to the weakness of the average human being when away from wholesome restraints of home and friends when he naturally looks for the worst side of life. However this may be, it is of the profoundest moment that the backbone of our nation is composed of men and women who have considered right and duty and the welfare of humanity of first and highest importance.

This brings me to a point that it seems fitting on this occasion should be emphasized. My recent experience has made me realize more fully that the continent of Europe furnishes no parallel to the American college. I am persuaded that the American college fills a vital place in our American system of education. All forms of higher education on the Continent are professional in character. The student goes directly from the gymnasium in Germany to the university which has no college of liberal arts. He pursues his studies in the same spirit as the student of medicine or law.

The spirit of the American college is relatively idealistic. It has for its fundamental purposes the development of the mind and character. This spirit demands that education shall first mean the harmonious development of all the powers of human personality. It demands that we shall first consider the needs of the man before the needs of the physician, the lawyer, the profession or calling of any kind. Contact with foreign schools has led me to cherish still more the things for which the founders of the American college stands, and for which, I hope, in the providence of God, it will always stand. Nothing else can take the place of that unswerving honesty, simplicity of life, loyalty and devotion to duty, and abiding trust in the eternal verities of true religion, which was the faith and practice of the founders of our American institutions of learning. These now and ever are the need of the nation, and the graduates of our colleges and universities have a great inheritance and therefore special obligations. That the American college, whether separate or a part of the University shall keep its high position in the coming generations, the distinctive things enumerated above must be maintained.

Justice Brewer, in his address, "The Mission of the United States," says: "With the eye of faith I see unrolled on the canvas of the future a glorious picture in which shall be seen every laborer dwelling beneath his own vine and fig tree, receiving ever a living

wage for his toil, every merchant and manufacturer pursuing his business and his industry without a thought of interruption by the ravages of war, and men of science and wealth combining in the achievement of more and more gigantic results, adding not merely to the necessities, but also to the comforts and luxuries of life, taking possession of land and water and air, and all the forces to be found in them and making them minister to human life. In the foreground will be seen that highest type of womanhood, the Madonna, and across her bosom will be these words: 'Mary hath kept all these things and pondered them in her heart;' while underneath will shine in letters of fadeless light, 'The United States of America has fulfilled its mission.'"

Members of the graduating class, in this day of re-examination and unrest of the world, it seems to me worth while to call to your attention our advantages in America and our consequent obligations, for privilege without responsibility is a curse for all concerned. I commend to you these words of Charles Sumner, with modification, taken from Plato and attributed by him to the Fathers of Athens:

"All hearts turn first to the Fathers of the Republic. Their venerable forms rise before us, in the procession of successive generations. They come from the frozen rock of Plymouth, from the wasted bands of Raleigh, from the heavenly companionship of Penn, from the anxious councils of the Revolution,—from all those fields of sacrifice where, in obedience to the spirit of their age, they sealed their devotion to duty with their blood. They say to us, their children, 'Cease to vaunt what they do, and what has been done for you. Learn to walk meekly and to think humbly. Cultivate habits of self-sacrifice. Never aim at what is not RIGHT, persuaded that without this every possession and all knowledge will become an evil and a shame. And may these words of ours be ever in your minds: Strive to increase the inheritance we have bequeathed to you,—bearing in mind always that, if we excel you in virtue, such a victory will be to us a mortification, while defeat will bring happiness. In this way you may conquer us. Nothing is more shameful for a man than a claim to esteem, not on his own merits, but on the fame of his ancestors. The glory of the fathers is doubtless to their children a most precious treasure; but to enjoy it without transmission

to the next generation, and without addition, is the extreme of ignominy. Following these counsels, when your days on earth are finished, you will come to join us, and we shall receive you as friend receives friend; but if you neglect our words, expect no happy greeting from us.' "

Sons of Pennsylvania, you have a great inheritance in your lineage, in your University, in your country. Let it be said in truth of you, you have kept these things and pondered them in your hearts.

CHARGE TO THE GRADUATING CLASS

By the Provost

One year ago, after conferring degrees upon the members of my first graduating class, I delivered to that class a portion of the charge spoken by the first Provost of the University to his first class of graduates. This morning, I wish to deliver to the members of the Class of 1912, in brief form, another charge framed from various charges uttered by the great Provost, that we may appreciate, in a sense, our brotherhood with the students of those early days; that we may have thrown about us, if possible, the atmosphere in which they lived, and that we may note the deep concern and honest desire of our early teachers to have their students go forth into the world and acquit themselves well.

To me, the words of admonition seem as appropriate to-day as when they were first spoken, so I beg you to receive them in the spirit of the men of the University of Pennsylvania:

"Boast not of your youth or strength. Continue in the hope you entertain, and the resolution you have formed of preparing yourselves to live a life of future usefulness, and to animate you in this resolution, look forward to the glorious scenes in which you will be called on to act your part; and look back also 'to the rock from whence you were hewed and the hole of the pit from whence you were digged.' Think of the steps by which your virtuous and frugal ancestors rose into consideration, and say whether you can find one of their number that attained to any eminence but by virtue and industry in some settled calling or profession.

Look back, with reverence look back, to the times of ancient virtue and renown. Look back to the mighty purposes which your fathers had in view, when they traversed a vast ocean, and planted this land. Recall to your mind their labors, their toils, their perseverance, and let their spirit animate you in all your actions.

Look forward also to distant posterity. Reflect that on you it may depend, whether this great country, in ages hence, shall be filled and adorned with a virtuous and enlightened people, enjoying liberty and all its concomitant blessings, or covered with men more contemptible than the savages that roam the wilderness, because they once knew the 'things which belonged to their happiness and peace, but suffered them to be hid from their eyes.'

Do not vainly expect that every day will be to you a day of prosperity and triumph. The ways of Providence lie through mazes, too intricate for human penetration. Mercies may often be held forth to us in the shape of sufferings; and the vicissitudes of our fortune in building up this American fabric of happiness and glory may be various and chequered. But let not this discourage you. Yea, rather let it inspire you with a holy fervour—a divine enthusiasm—ever persuading yourselves that the cause of Virtue and Freedom is the cause of God upon earth. This was the spirit that animated the heroes of ancient times; that raised their names to the summit of renown, and filled all succeeding ages with their unspotted praise.

Stand for good education and for the training up of a succession of Patriots, Lawgivers, Sages and Divines; because liberty will not deign to dwell but where her fair companion knowledge flourishes by her side; nor can government be duly administered but where the principles of religion, justice, virtue, sobriety, and obedience for conscience sake are upheld.

Adversity is the season which shows the spirit of a man in its full vigor; and times of evil calamities never fail to strike forth lights, sometimes single, and sometimes whole constellations, mingling their kindred rays to warm and illuminate the genius of their country.

Spurn from you the siren's sloth and idleness, and seek to come forth on the theatre assigned to you, all energy and action,

in the sight of mortal and immortal powers, striving to fill your post with diligence and dignity—abiding therein, but abiding with God. Spurn from you the love of false pleasures. Seek to make a just estimate of that pleasure, which God in His goodness has ordained as the true ally of our cares. True pleasure, the sacred, never-fading bliss of all who are born into this world—high and low—old and young—is to exert the first effort of their reason to consider for what they were sent into it, and to discharge their part in this life faithfully.

Be instant, in season and out of season, in public and in private, as occasion may require, or necessity may call; by day and by night, in times of peace and prosperity, as well as in times of adversity and persecution. Be not dismayed, or negligent of the gift that is in you. Repel false teachers and false doctrines. Root out the tares from the wheat, with every weed, or new fangled thing, which springs up at enmity to the truth.

This world is a chequered scene, and we are to expect no pure bliss in it. But act well your part as good citizens, good men and good women; and then you may safely trust the issues to the direction of that Almighty Being, who is supremely just, wise and holy."

HIGHER DEGREES CONFERRED

Credentials of Candidates

The Faculty of the Graduate School held its formal session for the reception of the credentials of candidates for the higher degrees on Saturday, June 15, 1912, in the Auditorium, Houston Hall, the Provost in the chair.

Forty-eight candidates for the Master's degree were presented to the Faculty by the Dean, who, in each case, read a brief sketch of the candidate's life, certifying that all the conditions prescribed by the statutes of the University and the rules of the Graduate School had been fulfilled, and recommending the candidates for the Master's degree. Their names follow:

MASTER OF ARTS

JOHN LEEDS BARROLL, JR:	FREDERICK HENRY KOSCHWITZ:
English.	Transportation.
ALBERT REIFF BECHTEL:	MAX FISHER LEHMAN:
Botany.	Mathematics.
DARIUS WELLER BERKY:	ESTHER LOUISE LITTLE:
Psychology.	Sociology.
CALEB VALENTINE BREADY:	CLAUDE DELMONT LOCKE:
Economics.	Chemistry.
ARTHUR T. CAMERON:	GEORGE WILLIAM MCCLELLAND:
Transportation.	English.
WILLIAM SEAL CARPENTER:	CHARLES EDWARD MEYERS:
History.	English.
GIUSEPPE CHERUBINI:	FRIEDA MUELLER:
Romanics.	Germanics.
L. HOWELL DAVIS:	THOMAS GILSON PARRIS:
Political Science.	Psychology.
GIOVANNI M. DI SILVESTRO:	JOHN YOUNG PENNYPACKER:
Political Science.	Botany.
MARSHALL HAND DIVERTY:	LOUISE FRANKLIN PERRING:
Anthropology.	History.
HOWARD S. EITZEL:	WILLIAM JEROME POTTER:
Philosophy.	Transportation.
THOMAS DAWES ELIOT:	HENRY FERRIS PRICE:
Sociology.	Mathematics.
CLEMENT EDGAR FOUST:	CLARA MAY REINHEIMER:
English.	English.
WILLIAM STOKES GARRISON:	BEECHER LEE RHODES:
Pedagogy.	Sociology.
PERCY WARREN GREEN:	WILLIAM ELY ROBERTS:
Economics.	History.
GARTON SPENCE GREENE:	DAVID R. ROHRBACH:
Latin.	Psychology.
JOHN MANSFIELD GROTON:	FLORENCE ROTHERMEL:
Psychology.	Pedagogy.
CAROLUS POWEL HARRY:	FRANK HENRY SCHRENK:
History.	Economics.
LIN-YI HO:	OSCAR MATTHIAS SULLIVAN:
Pedagogy.	Pedagogy.
MABEL DODGE HOLMES:	JACOB TANGER:
English.	History.
GILBERT ROBERT HUGHES:	LOUIS JAMES VELTE:
Economics.	Sociology.
JEANNETTE KEIM:	EDGAR EUGENE WHITE:
Germanics.	Sociology.
IRVIN COOKE WILLIAMS:	
Sociology.	

MASTER OF SCIENCE

WILMER FLETCHER BURNS:	HEZZLETON E. SIMMONS:
Pedagogy.	Chemistry.
CHENKU PHILIP YAO:	
Geology.	

After the credentials had been read the candidates present withdrew, and the Faculty unanimously voted to recommend all

those whose credentials had been read to the Trustees for the degrees for which they had been presented.

Thirty-four candidates for the degree of Doctor of Philosophy were then brought before the Faculty in groups according to subject. Each candidate was presented to the Faculty by a member of the Group Committee in charge of his major subject. The presenter read a sketch of his academic record and an outline of the scope and content of his thesis. In each case, after the credentials had been read, the Provost asked whether any member of the Faculty desired to make any inquiry of candidate or presenter. The candidate or candidates then withdrew, and the presenter made a formal motion to the effect that the Faculty recommend to the Board of Trustees the conferral of the degree of Doctor of Philosophy. In each case the Faculty unanimously voted "aye."

IN SEMITICS:

Professor MONTGOMERY, *Presenter.*

MATTHEW WILLARD LAMPE was born in Bethlehem, Connecticut. He received the degree of Bachelor of Arts from Knox College in 1904. From 1906 to 1909 he was a student at Omaha Theological Seminary and in 1909 entered the Graduate School, selecting Semitics as his major and European History and History of Religions as his minors. He has thirty-four units to his credit, of which two were received for work done at the Omaha Theological Seminary. From 1910 to date Mr. Lampe has been Harrison Fellow in Semitics.

The subject of his thesis is: "THE LIMITATION UPON THE POWER OF THE KING OF THE HEBREW MONARCHY."

The purpose of this thesis is to show that the monarchy which was established by the Hebrews in the Eleventh Century B. C., and which continued, in united and divided form, to the Sixth Century B. C., was of very limited power. The limiting forces were of a geographical, political and religious nature. The broken and diverse physical features of Palestine were a constant obstacle against any fast or centralized union. The characteristic individualism of Semites, with their well-known incapacity for organized government, showed itself among the Hebrews in virile form; it safe-guarded local institutions against the aggressions of the king, and caused the continuance of tribal distinctions to the very end of the monarchy. The religion of Jahweh also helped to maintain the democracy of the nation; it formulated a law to which all were subject, and it raised up a body of men, the prophets, who fearlessly condemned every kind of social wrong, and whose personalities were such that they could command the respect of both kings and people. These democratic tendencies, furthermore, were part and parcel of the nation's ideals, and underlay all their conceptions of the common age with its Messianic kingdom.

Professor MONTGOMERY, *Presenter*.

HENRY SCHAEFER was born in Phina Province, Germany. From 1901 to 1905 he was a student at the Bloomfield Theological Seminary and from 1907 to 1908 did graduate work at the University of Chicago. The following year he was Special Fellow at the American School for Oriental Study and Research at Jerusalem. In 1910 he entered both the College and Graduate School of this University and received the Bachelor of Arts degree in 1911. His major subject is Hebrew and his minors Assyriology and History of Religions. He has twenty-seven units to his credit, thirteen and one-half of which were received for work done at the Universities of Chicago and Heidelberg.

The subject of his thesis is: "HEBREW LAND TENURE AND THE POOR LAWS."

The subject of this thesis involves a discussion of the more salient features of kinship and the prevailing forms of social integration among the ancient Hebrews. Survivals of matriarchy are found in the oldest portions of the Pentateuch. Patrilineal descent becomes an established principle under the monarchy. Inheritance is from father to son, the first born receiving a double share and assuming the family headship. In default of sons the brother of the deceased inherits the property by marrying the childless widow, the first born son of this union succeeding to the name and estate of the departed. Failing a brother, the goël or next of kin is entitled to the succession. As the chief aquate, the goël has the right of preemption and redemption. In the absence of direct heirs, adopted male slaves have a capacity for inheritance.

The thesis also treats of the rise of Israel, social problem and its causes, namely, the growth of commercialism or the exaction of an exorbitant rate of interest on real estate, followed by the concentration of small holdings in the hands of a privileged class of officials and courtiers. Under the influence of prophecy, Hebrew legislation sought to remedy these conditions by the promulgation of numerous poor laws, of which the year of release, the sabbatical year and the year of jubilee are the most important. Ezekiel's plan of allotment is an attempt to solve the social problem from the standpoint of ideal legislation.

The Executive Committee certifies that these candidates have fulfilled the requirements prescribed for the Doctorate.

IN CLASSICS:

Professor BATES, *Presenter*.

HYMEN LEO GRABOSKY was born in Wilna, Russia. He received the degrees of Bachelor of Arts and Master of Arts from this University in 1902 and 1904, respectively. In 1902 he entered the Graduate School as Harrison Scholar in Classics and was appointed Harrison Fellow for the following year and held a University Scholarship during 1904-05. There are thirty-five and one-half units recorded to his credit. The Executive Committee certifies that Mr. Grabosky has fulfilled the conditions prescribed for the Doctorate.

The subject of his thesis is: "THE PHILOSOPHICAL DISCOURSE *Πορι αὐτοκράτορος λογισμοῦ* FALSELY ATTRIBUTED TO FLAVIUS JOSEPHUS AND THE NEW TESTAMENT."

There has come down to us in the manuscripts of Josephus and in some manuscripts of the LXX, a philosophical discourse entitled "On the Supremacy of Reason over Emotion," which has been falsely attributed to Josephus. There are over forty passages in this work which are more or less parallel to passages in the New Testament. This thesis is a critical examination of these passages.

The following three theories may be advanced to account for these parallels: Plagiarism, Christian Interpolations, Accidental Concurrence, due to contemporary influence. The "Plagiarism" theory is disproved by the date of this essay, 60-70 after Christ, and by the fact that Pseudo-Josephus and the New Testament differ from each other as widely as possible in form, spirit and contents.

The "Christian Interpolation" theory, that is, that a Christian interpolator inserted the parallel passages in this essay from the New Testament, holds good in the case of a great many passages.

The theory of "Accidental Concurrence" due to contemporary influence holds good in the case of those New Testament parallels in Pseudo-Josephus which do not correspond verbally to the New Testament passages which they resemble, and their genuineness is further supported by internal evidence and by other parallels in Classical Greek or in Judeo-Hellenic literature.

Professor McDANIEL, *Presenter*.

HELEN BELL TRIMBLE was born in Philadelphia, Pennsylvania. She received the degrees of Bachelor of Arts and Master of Arts from Bryn Mawr College in 1902 and 1905, respectively. In 1908 she entered the Graduate School, electing Latin as her major and Latin Christian Literature and Archaeology, and European History as her minors. She held a Half University Scholarship in History in 1908-09; University Scholarship in Classics in 1909-10; and from 1910 to date a Pepper Fellowship in Classics. Miss Trimble has thirty-four and one-half units to her credit, of which seven units were received for work completed at Bryn Mawr College, and the Executive Committee certifies that she has fulfilled the conditions prescribed for the Doctorate.

The subject of her thesis is: "JUVENAL AND THE ROMAN EMPERORS."

The importance of understanding Juvenal's attitude toward the Roman emperors appears from a comparison of his Satires with the extant works of the historians, Suetonius, Tacitus, Velleius Paterculus, Valerius Maximus and Plutarch, who wrote contemporary accounts of them. The study shows that Juvenal wrote independently of Suetonius and of Plutarch, and relied upon Tacitus for the Sejanus and the Messalina episodes alone. The indications are that with these exceptions the Satires have the value of an original source in passages where allusion is made to the Roman emperors. Juvenal represents the ideas and prejudices of the ordinary Roman citizen. His characterizations of the emperors are, therefore, valuable as supplementing the information which we have from the professed historian.

IN ENGLISH:

Professor CHILD, *Presenter*.

ARTHUR LLEWELLYN ENO was born in Charlotte, Vermont. He received the degree of Bachelor of Arts from Brown University in 1895 and the degree of Master of Arts from Harvard University in 1902. He entered the Graduate School in 1908 as Harrison Scholar in English, selecting English Literature as his major and one minor, and English Philology as his second minor. He has thirty-two units recorded to his credit, of which twenty-one are for work done at Harvard University, and three from Chicago University.

Aside from his record as a student, Mr. Eno has been Instructor in English and German, Vermont University, 1898-1900; Instructor in English, University of Texas, 1902-04; *ibid.*, University of Illinois, 1904-08.

The subject of his thesis is: "THE DRAMA OF THE INTERREGNUM, 1642-1660."

This dissertation offers a contribution to the history of the English drama in presenting for the first time in a single monograph an account of the dramatic activity within the period of the Commonwealth under Cromwell's government when the theaters were suppressed by order of the Puritan Parliament.

By way of introduction this thesis reviews the concurrent causes which led to the closing of the playhouses, and tells the story of surreptitious performances despite the parliamentary ordinances against the stage; it analyzes also the tendencies leading to the presentation of the so-called "first English opera" (1656) which introduced remarkable theatrical innovations, and secured the tentative restoration of the English drama to the stage.

The actors and playwrights in this period were variously engaged; many naturally enlisted in the King's army and fought loyally till the event of the war proved alike fatal to monarchy and the stage. Some few actors, depressed by the fanatic gloom in England, made up a troupe and became strolling players at large on the Continent; others kept taverns, tinkered clocks, or gave exhibitions in tight-rope dancing, but most of them turned to their former employment and persisted in defying the laws, not with impunity, however, by giving performances in private houses, in barns by candle light, on village greens, in wayside inns, and at country fairs.

A score of dramatic authors, some of them titled noblemen, took refuge in France, Flanders, and Holland, where they wrote and published their plays in Antwerp and The Hague. Less fortunate playwrights, unable to enjoy exile abroad in this period of forbidden drama, obtained only precarious support; some of them continued to write plays for publication, but many of them were obliged, with the assistance of the actors, to hunt out the manuscripts of their contemporaries, or to draw forth from their hiding places the unprinted plays of old dramatists, and publish them. Thus were printed for the first time some three hundred or more plays which otherwise might never have come to light.

In assembling much scattered information, and in presenting some new material, this thesis proves that the drama was by no means so dead as is commonly supposed during the Puritan suppression of the stage.

Professor CHILD, *Presenter.*

MARTHA GAUSE McCAULLEY was born in Wilmington, Delaware. She received the degrees of Bachelor of Arts and Master of Arts from Wellesley College in 1892 and 1897, respectively. From 1894 to 1896 she was a student at Oxford University, England. In 1910 she entered the Graduate School as the holder of the special Bennett Fellowship in English and the following year was appointed to the Bennett Scholarship in English. Miss McCaulley has thirty-four units to her credit, fifteen of which were received for graduate work done at Oxford University.

Apart from her record as a student, Miss McCaulley has been Instructor in English at Wellesley College from 1897 to 1906 and Dean of Women at the University of Colorado from 1906 to 1910.

The subject of her thesis is: "A SKETCH OF THE ORIGIN, FUNCTION, AND CONTENT OF THE EXTRANEOUS PORTIONS OF THE ENGLISH DRAMA BEFORE 1642."

This thesis presents some detailed results of a study of the prologues epilogues, choruses, inductions, dedications and other "addresses" appended to English drama written before the closing of the theaters in 1642. The data furnished seem to warrant the following particular conclusions:

(1) The prologue is the most ancient, varied and useful of these forms. Its function is a modification of the expository and didactic comment which the priest offered when drama was still under the control of the church; and its development in secular drama has been determined by the influence of classical example upon its form and of circumstances upon its content.

(2) The epilogue, although derived from the *Te Deum* which ended all church services containing drama, owed to this origin rather its position than its function or content. These drew from Roman comedy examples. It was propitiatory and apologetic and a bid for applause.

(3) The chorus, being a form essentially incompatible with the popular nature of English drama, was cultivated under the influence of Seneca, but from the first handled freely, and soon discarded.

(4) The induction had an exceedingly brief career, being for the most part an extension of one of the English forms of the chorus, and like it generally a hindrance to the effectiveness of the play.

(5) Dedications and other addresses were mainly for material advantage to playwright or publisher. They indicate certain economic aspects of the conditions to which literature as a profession was subjected, and furnish a few biographical facts concerning author, actor, patron and publisher.

As a whole the contribution made by the extraneous parts of drama to our knowledge of the time, is merely representative, not conclusive: and must be supplemented by the text of the drama proper; by documents legal, civil and parochial; by statutes and decrees. But it is valuable as far as it goes, serving often to determine the chronology of extant plays, and the names of plays no longer in existence; to indicate the whereabouts of individuals during certain intervals otherwise unattested; to suggest the nature of patronage in the particular case, etc.

From the extraneous parts of drama, then, general conclusions may not be drawn: their value is illustrative and supplementary, not absolute and final.

The Executive Committee certifies that these two candidates have fulfilled the conditions prescribed for the degree of Doctor of Philosophy.

IN GERMANICS:

Professor LEARNED, *Presenter*.

JOHN THEODORE GEISSENDOERFER was born in Kimball, South Dakota. He received the degree of Bachelor of Arts from the University of Wisconsin in 1907. He enrolled as a graduate student in 1909 and selected German Literature as his major and German Philology and Ethics as his minors. During 1910-11, he held the Deutsche Verein Traveling Scholarship. He has thirty-nine units recorded to his credit, of which fourteen are for work done at the Universities of Berlin and Munich, and three units from the University of Iowa. The Executive Committee certifies that he has fulfilled the conditions prescribed for the Doctorate.

Aside from his record as student, he has been Assistant in German at the State University of Iowa, 1907-09; Pennsylvania, 1909-10, and 1911 to date.

The subject of his thesis is: "CHARLES DICKENS IN DEUTSCHLAND." (Written in German.)

This dissertation is a study in Comparative Literature, and the writer shows to what extent the English novelist moved the minds of the reading public of Germany, and in how far, and with what degree of success, his style was imitated. The predilection which the German readers had for the great English story-teller is shown in the first part of the study treating of the translations, while his influence on the style of German novelists is presented in the second part, which discusses in detail the individual authors who reflect Dickensian influence.

All the novels were translated almost as rapidly as they appeared in the original. The first novel to be translated was "Pickwick Papers" in 1839, therefore within one year of its publication in London. From this time on, until the present, translations of single novels and of the complete works have continued to appear.

The second part of the dissertation gives the results of an intensive study of six German novelists of the nineteenth century, and shows how the works of the Englishman were at first only models for crude imitations, but gradually, after careful study, furnished the foundation on which the Germans built their own theory of the novel.

IN ROMANICS:

Professor RENNERT, *Presenter*.

WALTHER PAUL FISCHER was born in Reutlingen, Württemberg, Germany. He received the degree of Bachelor of Arts from the Gymnasium

of Regensburg, Germany, in 1907. From 1907 to 1910, Mr. Fischer was a student at the Universities of Munich and Montpellier, and the following year, Fellow in Romanics at Columbia University. In 1911, he entered the Graduate School as Harrison Fellow in Romanics, electing Romance Literature as his major, and Romance Philology and English Philology as his minors. He has seventy-four and one-half units to his credit, of which fifty-eight are from the Universities of Munich and Montpellier, and ten and one-half from Columbia University. The Executive Committee certifies that Mr. Fischer has satisfied the requirements prescribed for the Doctorate.

The subject of his thesis is: "THE INFLUENCE OF THE *ASTRÉE* OF D'URFÉ ON LA FONTAINE."

The object of the present dissertation was to determine the relations which there might exist between the works of La Fontaine and d'Urfé's *Astrée*, the famous French pastoral novel of the beginning of the seventeenth century.

The following plan has been adopted: In a first part all the passages were examined in which La Fontaine himself refers to the *Astrée*, and the significance of those passages was shown. A special study was made of the opera *Astrée*, which La Fontaine drew from d'Urfé's novel. A second part took up the internal evidence, showing the similarity or identity of inspiration in certain parts of La Fontaine's fables, *contes*, and especially in his novel *Les Amours de Psyché et de Cupidon*. In the conclusion, the results were grouped chronologically. It showed that the influence of the *Astrée* of La Fontaine was strongest in the poet's earlier period, while it became sensibly weaker with the growing of his creative power.

IN HISTORY:

Professor LINGELBACH, *Presenter*.

PAUL VAN BRUNT JONES was born in Ann Arbor, Michigan. He received the degrees of Bachelor of Arts and Master of Arts from the University of Michigan in 1906 and 1908, respectively. From 1908 to 1910 he was a graduate student at the University of Michigan. In 1910 he entered the Graduate School, electing European History as his major, and American History and English Literature as his minors. For two years, 1910 to date, he has been Harrison Fellow in History. Mr. Jones has twenty-seven units to his credit, twelve of which were received for graduate work done at the University of Michigan.

Apart from his record as a student, he has been Assistant in History at the University of Michigan, 1907-08; and Instructor, 1908-10.

The subject of his thesis is: "THE HOUSEHOLD OF A TUDOR NOBLE."

This thesis aims to study in detail certain phases of the home life of the English nobility during the Tudor Period—a most important side of the existence of that great class of English society which has been hitherto much neglected. With this intent the personnel of typical noble households flourishing between 1450-1650 is first set forth, the membership of a characteristic establishment being thus determined.

Next, and perhaps the most important part of the work, is a detailed description of the composition of a household. Here emphasis is chiefly laid on the intricate role played by the noble lords themselves in the construction and management of their great corps of household officers and servants, the reasons for their minute interest in such labor being suggested.

A chapter is then devoted to foods, this being preliminary to a discussion of the household supplies, the most costly home department to maintain. In the story of the management of this department, with which the study concludes, the work of the nobles themselves is again principally stressed.

The thesis is based entirely upon source material of a peculiarly reliable character, namely, the household account books, kept by every establishment from year to year, with an exactitude of detail astonishing to contemplate. Its particular value lies in the fact that it reveals the Tudor Nobles in quite a new light, showing them as the exacting personal managers of very costly household establishments, and as men who, in addition to their political interests and aspirations, were living a full, busy home life, by no means given over to sloth and idle roistering.

Professor LINGELBACH, *Presenter*.

WILLIAM JOSEPH MCCALLEN was born in Philadelphia, Pennsylvania. He received the degree of Bachelor of Arts from St. Mary's University in 1909 and the degree of Master of Arts from this University in 1910. In 1909 he enrolled as a graduate student, electing European History as his major, and English Literature and Latin as his minors. There are twenty-five units recorded to his credit.

The subject of his thesis is: "THE EXTERNAL RELATIONS OF ENGLISH ABBOTS IN THE FOURTEENTH CENTURY."

This thesis is in three parts: (1) the Abbot and the Pope; (2) the Abbot and the Bishop; (3) the Abbot and the Realm, and the last section is divided into the Abbot and the King, the Abbot in Parliament, the Abbot and his tenants and the Abbot and the Town.

A prevalently good understanding united the Fourteenth Century Abbots and Cathedral Priors with the head of the Church. Between the Episcopate and the Abbots, fairly normal relations are obtained, save for an exaggerated consciousness of their exempt rights, on the side of certain Abbots of exempt jurisdiction. There is a tendency to reinforce episcopal powers while reducing some overgrown prerogatives in the Religious Orders.

Equally normal, all told, were the relations between Abbot and King. The principle of temporal jurisdiction in temporal cases, of spiritual jurisdiction for Church cases, obtains uncontested in theory and usually in practice.

Between the Abbot and the Town, the situation is not so generally harmonious. Many monastic towns reflect a spirit of growing reluctance to be governed or influenced by monastic jurisdiction, just as other towns were unwilling to submit to the control of lay feudal lords.

The relations of Abbot and tenants were normally good, barring the abnormal status of the realm at the exit of Edward II, and the furious out-

break of 1381: Tyler's Rebellion. A growing disaffection, again appears formative in the popular mind in contact with feudal customs like the Prior's Palfrey tax. Probably the indications of better economy at Gloucester, for instance, than at St. Alban's are partly to be explained by the rural isolation of Gloucester, the broad highway site of St. Alban's within twenty miles of London.

Professor LINGELBACH, *Presenter*.

JOHN MUSSER was born in Huntingdon, Pennsylvania. He received the degrees of Bachelor of Arts and Master of Arts from Pennsylvania in 1909 and 1910, respectively. He entered the Graduate School in 1909 as Harrison Scholar in History. The present year he holds a special Harrison Fellowship in History. His major is American History and his minors European History and Psychology.

Aside from his record as a student, Mr. Musser was an Assistant in History at this University from 1910 to 1911.

The subject of his thesis is: "FRENCH INTERVENTION IN MEXICO."

Conditions much similar to those which have prevailed in Mexico since the overthrow of Porfirio Diaz constituted the excuse for foreign intervention in 1861. The long struggle for the separation of Church and State finally resulted in the overthrow of the Conservatives and the establishment of the liberal government under Benito Juarez in Mexico City.

The inability of the new government to meet the demands for damages incurred by foreigners during the years of disorder and war led to the intervention of England, Spain and France. The chicanery and exorbitant demands of France soon led to the withdrawal of the other powers.

In the meantime President Buchanan had urged the intervention of the United States and President Lincoln had attempted to make a treaty providing for a loan to Mexico sufficient to meet the most pressing of her foreign obligations. The outbreak of the Civil War and the heavy expenses incurred prevented the consummation of these plans.

Napoleon III saw in these events a chance to re-establish a great colonial empire, to break down the Anglo-Saxon supremacy in the Western Hemisphere, to enrich France with the products of the Mexican mines, to placate the Pope by restoring the old ecclesiastical system in Mexico, and to heal the breach with Austria by placing the Archduke Ferdinand Maximilian on the imperial throne of Mexico.

The flaws in his reasoning lay in an over-estimation of the strength of the Church party in Mexico, and in supposing that the South would achieve her independence as a result of the war in this country. French arms were finally successful in establishing the empire, and in placing Maximilian on the throne in the spring of 1864. Three years later he was executed by his successful opponents.

Professor LINGELBACH, *Presenter*.

WILLIAM WARREN SWEET was born in Baldwin, Kansas. He received the degrees of Bachelor of Arts from Ohio Wesleyan University in

1902, Bachelor of Divinity from Drew Theological Seminary in 1906 and Master of Arts from Pennsylvania in 1909. He enrolled as a graduate student in 1906, electing American History as his major, and European History and Semitics as his minors. He held a Half University Scholarship in Semitics, in 1908-09; and in History from 1909 to 1911. There are twenty-eight and one-half units recorded to his credit, of which five are for work done at Drew Theological Seminary and at Columbia University, where he was a graduate student during 1905-06.

Apart from his record as a student, Mr. Sweet has been Assistant in History, Ohio Wesleyan University, 1911 to date.

The subject of his thesis is: "THE METHODIST EPISCOPAL CHURCH AND THE CIVIL WAR."

The object of this study is to show the manner in which the Methodist Episcopal Church lent its influence in support of the Government during the Civil War. The slavery contest within the Church, which resulted in a slavery schism in that body, in 1844, is first reviewed, followed by a summary of the general status of the Church at the opening of the war. The general patriotic activities of the Church, in the various sections of the North, such as the holding of patriotic services, the passing of patriotic resolutions, church encouragement of enlistments, and other kindred activities, are then considered.

The last half of the study consists of a consideration of a number of special topics relating to the Church's activities in war time. The Missions of the Methodist Episcopal Church in the South, during the war, present an interesting phase of northern church activities where vacant church properties in the South were taken and used by representatives of northern churches under military protection. Following this is a chapter on Methodist periodicals during the war, in which the general attitude, the circulation and influence of the important church periodicals are considered. A chapter on Methodist chaplains tells of the manner of appointment and the work of the Methodist chaplains, with a list of those who served in that capacity. Special consideration is then given to the patriotic activities of the War Bishops and important Church officials. The last chapter in the text proper relates to Methodist cooperation with interdenominational organizations, such as the United States Christian Commission, the American Bible Society and the various freedmen's organizations. At the close is a chapter on Bibliography, with critical comments.

The Executive Committee certifies that these four candidates have satisfied the requirements prescribed for the degree of Doctor of Philosophy.

IN HISTORY OF RELIGIONS:

Professor MONTGOMERY, *Presenter*.

JAMES JEFFERSON WATSON was born in Aiken, Alabama. He received the degrees of Bachelor of Arts from Mercer University in 1909 and Master of Arts from this University in 1911. He has been a student at Crozer

Theological Seminary, 1909 to date, and received the degree of Bachelor of Divinity from that institution this June. In 1909 he enrolled as a graduate student, electing History of Religions as his major and Philosophy and Sociology as his minors. During the present year Mr. Watson holds a University Scholarship in the History of Religions. He has twenty-four units to his credit, of which number four are for work done at Crozer Theological Seminary. The Executive Committee certifies that he has satisfied the requirements prescribed for the degree of Doctor of Philosophy.

The subject of his thesis is: "THE RELIGION OF THE NEGRO."

The religion of the native African is a worship of evil spirits who control all the affairs of life. In the transfer to the West Indies, the religion becomes pure superstition—Voodooism, or snake-worship, in Haiti and Louisiana; Obeahism, or pure witchcraft, in Jamaica.

In the transition to the United States, the Christian preacher gradually supplants the African medicine man, the slave becomes a member of the white church, and separate colored churches gradually arise. King Jesus becomes the friend of the slave, the evil spirits are embodied in "ole satan," the arch enemy of the colored Christian. Conversion is to have an "experience," a dream, a vision. Salvation means freedom and a home in heaven, with little reference to moral character.

With the coming of freedom, the colored members leave the white churches and form separate denominations. A group of ignorant preachers are "called;" worship degenerates, until checked by the rise of the educated class. To-day, many African traits survive, such as the belief in "dream-souls," "sperits," "witchcraft," "cungering," with demoralizing effects in the life of the race. These are offset by the rise of the educated minister through whom religion is coming to mean not emotionalism, but race pride, race independence, and race achievement.

IN POLITICAL SCIENCE:

Professor ROWE, *Presenter*.

CLARENCE ORAN GARDNER was born in Clay County, Nebraska. He received the degree of Bachelor of Arts from the University of Illinois in 1909. In 1911 he entered the Graduate School as Harrison Fellow in Political Science. His major subject is Political Science and his minors Municipal Government and American History. He has twenty-five units recorded to his credit, fifteen of which are for graduate work done at the University of Illinois from 1909 to 1911. The Executive Committee certifies that he has fulfilled the conditions prescribed for the Doctorate.

In addition to his record as a student, Mr. Gardner was Assistant in Political Science at the University of Illinois from 1909 to 1911.

The subject of his thesis is: "THE REFERENDUM IN ILLINOIS."

This thesis is a detailed study of constitutional and statutory provisions in Illinois relating to the submission of state-wide and local measures to a popular vote, together with a description of the actual operation of these

provisions and an analysis of the results. The development of the practice of referring measures to the people is traced from the admission of the state into the Union in 1818 to the present time, with special reference to the recent movement toward complete direct legislation. Attention is directed to the number and character of questions that may be submitted, to ballot conditions affecting referenda, and to constitutional issues involved. The major portion of the thesis is devoted to an analysis of the operation of the referendum (1), with reference to measures submitted throughout the state as a whole; and (2), with reference to measures affecting only local communities, such as counties, towns, and municipalities. Special consideration is given to the submission of propositions in the city of Chicago, and to the role which the referendum has played in the solution of city problems.

IN ECONOMICS:

Professor ROWE, *Presenter*.

ERNEST MINOR PATTERSON was born in Cincinnati, Ohio. He received the degrees of Bachelor of Arts and Master of Arts from Park College in 1902 and 1904, respectively. During 1909-10 he was Fellow in Economics at the University of Chicago. He enrolled as a graduate student in 1910, electing Economics as his major, and Transportation and Sociology as his minors. There are twenty-seven units to his credit, eleven of which are for graduate work done at the University of Chicago.

Apart from his record as a student, Mr. Patterson was Principal of Wasatch Academy, Mt. Pleasant, Utah, from 1905 to 1906; Dean of Washington College, 1908 to 1909; and Instructor in Finance at this University, 1910 to date.

The subject of his thesis is: "CO-OPERATION AMONG THE RETAIL GROCERS OF PHILADELPHIA."

The retail grocery business of a large city is intensely competitive and the profits of the average grocer small, as is shown by his large expenses and his narrow margin of profit on the different classes of goods handled. This is very evident in Philadelphia where the number of grocery stores is large as compared with the population. The Retail Grocers' Association, formed in 1886, is an attempt to meet these conditions through co-operation among the grocers. Its various attempts have been in part successful and in part failures. The leading ones are analyzed and the reasons for success or failure pointed out.

Some of these methods of co-operation are now of questionable legality. Those open to question are examined and the probable attitude of the courts, as indicated by decisions in similar cases, is indicated. The field within which the Association may successfully and legally work is thus indicated. The conclusion reached is that there is a definite field within which the Association has successfully and legally worked and may continue to work in increasing the profits of its members without raising prices or in other ways injuring the consumer. This is by a general improvement in the tone of each grocer's business methods and by the elimination of many expenses through co-operative purchasing direct from the manufacturer.

Professor ROWE, *Presenter.*

C. LINN SEILER was born in Philadelphia, Pennsylvania. He received the degrees of Bachelor of Arts and Master of Arts from Haverford College in 1902 and 1905, respectively. In 1906 he entered the Graduate School, electing Economics as his major and Sociology and Political Science as his minors. He has thirty units recorded to his credit, of which seven are for graduate work done at Haverford College.

In addition to his record as a student, Mr. Seiler was Instructor in Mathematics, Mechanical Drawing and Music at Haverford College from 1903 to 1906. From 1906 to date he has been Instructor in Economics at this University.

The subject of his thesis is: "CITY VALUES."

One of the most striking phases of the present revolution in public opinion, particularly in this country, is the keen and intelligent interest taken by the citizens of our municipalities in matters of civic housekeeping. Where twenty years ago, election issues were largely of a political nature, to-day the tax rate, water supply and tenement-house regulation claim the voter's first attention. The interrelation of municipal problems is now being more clearly seen; the connection, for instance, between housing congestion and an antiquated transportation system is a matter of almost universal knowledge. And it is with a view of analyzing the present-day urban problems, in order to visualize more clearly our municipal maladjustments, that this paper has been written. The political difficulties of administration are neglected, since it is premised that the municipality is essentially concerned with local needs of an economic and social nature which do not hinge on political issues in any way. Municipal policy is in reality a local platform of concrete economic needs of the time; maladjustments are solvable problems of our own making, needing only the efficient economic program that is based on intelligent valuation of city assets. City values are contrasted with city deficits, maladjustments compared with readjustments, and a new concept of valuation is brought forward to guide the new city builder, viz:—the increased and paramount appreciation of the human values (in health, convenience and security), and the more even adjustment of property values in terms of city life.

Professor ROWE, *Presenter.*

WILLIAM HARRISON SPRING STEVENS was born in East Claire, Wisconsin. He received the degree of Bachelor of Arts from Colby College in 1906 and Master of Arts from George Washington University in 1909, where he was Fellow in Economics and Political Science during the year 1908-09. He was also Fellow in Economics at Cornell University during 1910-11. In 1911 he enrolled as a graduate student, taking Economics as his major subject, and Corporation Finance and Political Science as his minor subjects. He has forty-four and one-half units to his credit, thirty and one-half of which are for graduate work done at the Universities of George Washington, Cornell and Chicago.

Aside from his record as a student, Mr. Stevens has been Assistant in Economics at Pennsylvania from 1911 to date.

The subject of his thesis is: "THE POWDER TRUST, 1872-1912."

The first combination in the explosives trade was organized in 1872, and was followed by a successive series of books and agreements which have maintained the existence of the combination down to the present day. A new agreement was adopted in 1886 followed by a third in 1889, each new agreement signaling the suppression of active competitors and their entrance into the combination. Again in 1896 a new agreement known as the Understanding was entered into.

Meantime, the dynamite trade was gradually being organized and in this branch of the explosives trade a similar series of agreements were made.

In 1898, foreign manufacturers of gun powder and explosives invaded the United States, and this gave rise to the so-called European Agreement providing for a division of territory between the parties at interest.

In 1902, the E. I. du Pont de Nemours Company was organized and purchased the greater part of the interests in the existing pools or combinations. By a process of a transfer of securities and by subsidiary companies organized for that purpose in exchange for tangible assets, the du Pont de Nemours Company was left purely a holding corporation. It then began the gradual dissolution of subsidiary companies held by its own subsidiaries with the result that at the time the government brought suit, more than sixty companies had been so dissolved, the intent being to create one large single monopolistic concern.

Professor ROWE, *Presenter*.

FRANCIS DOUGHTEN TYSON was born in Odessa, Delaware. He received the degree of Bachelor of Arts from Pennsylvania in 1909, and entered the Graduate School the same year as Harrison Scholar in English. He elected as his major Economics, and as his minors Sociology and English. There are thirty-two units recorded to his credit.

Aside from his record as a student, Mr. Tyson has been Assistant in English at Pennsylvania, 1910-11, and in Sociology, 1911 to date.

The subject of his thesis is: "SOCIAL TENDENCIES IN THE MODERN DRAMA."

The aim of this thesis is to show the socializing influence of the modern drama in interpreting recent movements in social thought. The plays of Henrik Ibsen are analyzed from the standpoint of their social philosophy—as they depict the conflict between the individual and society, heredity and environment, the traditional and the social. The technical influence of Ibsen and his leadership in the struggle that opened the stage of Europe to the discussion of social questions, as seen in the plays of Hauptmann, Sudermann and Wedekind in Germany, and Brioux in France, is made clear. The transition to a Social Drama in England is shown in the plays of Jones and Pinero, protesting against the complacency and conventional traditions of English life. The use of the theater by Bernard Shaw as a medium for social propa-

ganda, and the spirit of social endeavor and service as revealed by the drama of Galsworthy, Barker, Hankin, and the younger English playwrights, are successively taken up. The growth of the social drama in America is then treated. The plays are grouped in their relation to important social questions of the day—the woman problem, political and business conditions, criminal procedure, poverty, tenement reform, class division, social religion and race relations. Finally, the prospect for a more vital drama of democracy, brought through readjustments in the theater and the pressure of social discussion, is discussed.

The Executive Committee certifies that these four candidates have fulfilled the conditions prescribed for the degree of Doctor of Philosophy.

IN SOCIOLOGY:

Professor LICHTENBERGER, *Presenter*.

ALICE PAUL was born in Moorestown, New Jersey. She received the degree of Bachelor of Arts from Swarthmore College in 1905 and the degree of Master of Arts from Pennsylvania in 1907. Miss Paul was graduated from the New York School of Philanthropy in 1906 and was a student in the School of Economics, London, in 1909. She entered the Graduate School in 1906, selecting Sociology as her major and Economics and Political Science as her minors. The present year she holds a Moore Fellowship in Sociology. There are twenty-nine courses recorded to her credit, of which four were received for work done at the New York School of Philanthropy.

The subject of her thesis is: "THE LEGAL POSITION OF WOMEN IN PENNSYLVANIA."

This study traces the legal position of women in Pennsylvania from the founding of the first permanent settlement to the present time; presents a summary of the law relating to women as it exists to-day; and attempts to determine the social forces which have produced the evolution in this law.

After brief reference to the situation under the Swedish and Dutch regimes, a detailed examination is made of the statutes, court decisions, constitutional provisions, and customs bearing upon the legal position of woman, from the assumption of control by the English to the present time.

It is shown that the course of development has been an uninterrupted movement in the direction of giving to woman ever increasing freedom from the restrictions of the common law; that this movement proceeded very slowly at first, modifications in the law being confined almost exclusively to the period after 1848; and that in this movement woman herself scarcely became a conscious factor until after 1848. It is concluded that the transformation in her legal status has been largely dependent on the change in her economic environment.

Professor LICHTENBERGER, *Presenter*.

CLARENCE ANDREW YOUNG was born in Pittsburgh, Pennsylvania. He received the degrees of Bachelor of Arts and Master of Arts from this

University in 1901 and 1908, respectively. He entered the Graduate School in 1901 as University Scholar in Sociology and during 1907-08 held a Half University Scholarship in that subject. His major subject is Sociology and his minors Economics and Anthropology, and he has thirty units recorded to his credit.

The subject of his thesis is: "THE DOWN-TOWN CHURCH."

This study deals with the social efficiency of the churches of the down-town districts of Philadelphia since 1880—a period of significant social changes.

The Church if functioning properly, is a social institution of value, in maintaining social control, and in aiding social progress. In the down-town districts of our cities where indifference and antagonism to social ideals are prevailing characteristics, the Church is especially needed.

But it is in such districts that the Church has had its most conspicuous failure. In 1880 there were 111 Protestant religious organizations in this district. To-day there are only 46, most of which are of diminishing importance as factors of social causation.

The causes for the decadence of the down-town churches are the change in the character of the population, an environment unfavorable to religious life, the creation of ethical rivals of and substitutes for the Church, the development of a class consciousness, and the failure of the Church to adapt itself to changed conditions.

The efficient down-town church will be organized on the principle of social service rather than denominational rivalry. Its method will be adapted to the satisfaction of community needs and its equipment will be adequate to the successful performance of its function.

The Executive Committee certifies that these two candidates have satisfied the requirements prescribed for the degree of Doctor of Philosophy.

IN PHILOSOPHY:

Professor SINGER, *Presenter*.

EDWIN RAY GUTHRIE, JR., was born in Lincoln, Nebraska. He received the degrees of Bachelor of Arts and Master of Arts from the University of Nebraska in 1907 and 1910, respectively. He entered the Graduate School in 1910 as Harrison Fellow in Philosophy, and was reappointed to that Fellowship for the present year, but resigned at the end of the first term to accept the position of Instructor in Mathematics at the Central High School, Philadelphia. His major subject is Modern Philosophy and his minors Ancient Philosophy and Mathematics. He has twenty-four and one-half units recorded to his credit, of which eight and one-half units are for graduate work done at the University of Nebraska. The Executive Committee certifies that he has fulfilled the conditions prescribed for the Doctorate.

The subject of his thesis is: "THE PARADOXES OF RUSSELL, WITH A BRIEF ACCOUNT OF THEIR HISTORY."

The thesis presented deals with a number of paradoxes which have been much discussed by recent writers in logic. A typical example is the proposition "This proposition is false," which if assumed true is by its own statement false, and if assumed false is true.

The method of solution so far offered has been to show that certain forms of statement like " x is false" do for one or more values of the indefinite terms imply contradictory results, and these forms of statement are then rejected.

The treatment in the thesis presented points out that these rejected forms do not become paradoxical except for certain values and holds that a solution must lie in so choosing axioms and definitions of the terms used that the paradoxical statement may be seen to contain contradictory assumptions as well as to imply contradictory results.

IN PEDAGOGY:

Professor YOCUM, *Presenter*.

QUINCY ADAMS KUEHNER was born in Little Gap, Pennsylvania. He received the degree of Bachelor of Arts from Muhlenberg College in 1902 and entered the Graduate School the same year as University Scholar in Psychology. He was reappointed to this Scholarship for the following year, but at the end of the first term was promoted to a Harrison Fellowship in the same subject. His major subject is Pedagogy and his minors Psychology and Philosophy. He has twenty-seven units to his credit.

The subject of his thesis is: "THE EVOLUTION OF THE MODERN CONCEPT OF SCHOOL DISCIPLINE."

While Mr. Kuehner first gives an historical summary of the ideas and practices dominant in school control until recent times, it is merely introductory to his more serious contribution—an effort to determine the factors which have been operative in bringing about the modern conception of school discipline.

Distinguishing in successive chapters, between the influence of individuals and of movements, he presents and sums up the arguments for milder discipline found in the writings of educational thinkers belonging to periods prior to the latter part of the eighteenth century, and briefly discusses the influence of social and political changes upon the spirit of the schoolroom. Tracing the foundation of nineteenth century educational development to Rousseau, he shows Rousseau's influence upon Pestalozzi, and discusses the influence of Pestalozzianism, Herbartianism, the Froebelian movement, the child study movement, and other factors upon the treatment of the child. He finally presents, compares and summarizes views and suggestions on school discipline given by the more prominent educational thinkers of the nineteenth century, and concludes with a brief summary of the means to discipline, which appear to have been most influential.

Professor YOCUM, *Presenter.*

CLARENCE LEONARD STAPLES was born in Portland, Maine. He received the degree of Bachelor of Arts from Harvard University in 1905 and Master of Arts from this University in 1908. He enrolled as a graduate student in 1906, selecting Pedagogy as his major and Psychology and Latin as his minors. During 1909-10 he held a Half University Scholarship in Pedagogy. He has twenty-four units to his credit, of which eight were received for graduate work done at Columbia and Harvard Universities.

The subject of his thesis is: "PROFESSIONAL LATIN IN MODERN ENGLISH."

Mr. Staples' thesis attempts to collect, classify, and publish the two thousand most practical scientific terms, derived from the Latin, which are found in Webster's Unabridged Dictionary. Comparing them with the two thousand Latin words compiled by Professor Lodge of Columbia, as constituting the more common vocabulary of Cæsar, Cicero and Vergil, he finds but twelve per cent of them included. A similar comparison with the examination papers used by the regents in the State of New York, shows only fifteen per cent of practical scientific vocabulary. He then analyzes the attendance in a typical New York City high school, where 566 pupils in a total enrollment of 2,500 elected Latin, and discovers that sixty-two per cent of the first year class drop it at the close of the first high school year and ninety per cent at the end of the second year.

Mr. Staples urges that if the high school course in the usual Latin writers should be paralleled during the first year by a course in applied scientific Latin, in which the eight hundred scientific terms most commonly used in the sciences in general are included in the vocabulary, the result would be: (1) a Latin course better suited to the practical needs of the great majority of the pupils; (2) a year's preparation for the study of the modern inflected languages; (3) valuable training in the foundation of English grammar and etymology; and (4) a direct knowledge of the scientific Latin involved in the elementary sciences which are now being given increased prominence in the high school work.

Professor YOCUM, *Presenter.*

AMBROSE LEO SUHRIE was born in New Baltimore, Pennsylvania. He received the degree of Bachelor of Philosophy from Stetson University in 1906 and Master of Arts from this University in 1911. He enrolled as graduate student in 1910 as Harrison Fellow in Pedagogy, to which Fellowship he was reappointed for the present year. His major subject is Pedagogy and his minors American History and Sociology. He has twenty-six units to his credit.

Aside from his record as a student, Mr. Suhrie has been Director of the Normal School, Stetson University, from 1906 to 1910.

The subject of his thesis is: "THE INDUCTIVE DETERMINATION OF EDUCATIONAL METHOD."

This is a defence of the thesis that the factors of educational method may, by scientific process, be isolated and that their importance in relation to each other in any of the complex processes usually referred to as "methods of teaching" may be measured quantitatively within reasonable limits of scientific accuracy. The functions of the scientific educational society are set forth and procedures for research are suggested for bodies of educational scientists desiring to undertake productive collaboration for the improvement of educational method. This form of investigation is illustrated by an experiment conducted by the author with several hundred sixth year pupils in two Philadelphia public schools, to determine the effect of time intervals in review. The aim of the treatment is to give a clear illustration of the application of the principles of the statistical method to educational data in this field.

Professor YOCUM, *Presenter.*

CHARLES ADAM WAGNER was born in Hamburg, Pennsylvania. He received the degrees of Bachelor of Arts and Master of Arts from Ursinus College in 1906 and 1908, respectively. In 1906 he entered the Graduate School and from 1907 to 1910 held a Half University Scholarship in Pedagogy. His major subject is Pedagogy and his minors Psychology and Sociology. He has twenty-six units to his credit.

In addition to his record as a student, Mr. Wagner is Professor of Pedagogy at the West Chester State Normal School.

The subject of his thesis is: "AN EXPERIMENTAL STUDY OF GROUPING BY SIMILARITY AS A FACTOR IN SPELLING."

This investigation is an effort to find the advantages of learning words grouped according to like difficulties in spelling as contrasted with learning them grouped in the usual way. Two classes of school children of like grades were given a first or preliminary test on the spelling of two hundred words chosen from their reading, history and other lessons. The same words were then studied, according to "group" difficulties by one class, and in the usual lessons by the other class. Following the study, a final test upon the same words was given, and its results compared with those of the preliminary test.

The class which studied its words by the "group" plan showed an improvement of twenty per cent over that shown by the class which studied in the usual way. It also misspelled fewer words in the daily lessons, and, in the final test, fewer words that had been *correctly* spelled in the preliminary test.

Mr. Wagner's interpretation of his results is highly analytic and constitutes a suggestive contribution to the application of the statistical method in educational research.

The Executive Committee certifies that these four candidates have satisfied the requirements prescribed for the Doctorate.

IN PSYCHOLOGY:

Professor TWITMYER, *Presenter*.

SAMUEL WEILLER FERNBERGER was born in Philadelphia, Pennsylvania. He received the degrees of Bachelor of Science and Master of Arts from this University in 1908 and 1909, respectively. He entered the Graduate School in 1908, electing Psychology as his major and Child Psychology and Sociology as his minors and has thirty-one units recorded to his credit.

In addition to his record as a student, Mr. Fernberger has been Assistant in Psychology at this University from 1908 to 1910 and Instructor from 1910 to date.

The subject of his thesis is: "ON THE METHODS OF JUST PERCEPTIBLE DIFFERENCES AND CONSTANT STIMULI."

Psycho-physics has evolved a number of methods by means of which we may find the sensitivity of a subject. Urban in his monograph on the Application of Statistical Methods for the Problems of Psycho-physics, shows that the two methods under discussion are formally identical. The problem investigated in this study was to test the experimental relation of the methods of constant stimuli and of just perceptible differences. The experiments were performed with lifted weights in such a way as to keep conditions as comparable as possible. This was done by collecting the data for both methods simultaneously. It was found that the results, which number 19,600 judgments obtained by the two methods, vary very little. It is therefore concluded that the methods give the same values for the thresholds.

The effect of progressive practice was studied incidentally and it was found that practice is due principally to greater concentration of attention on the judgment. Changes in the manner of lifting the weights and other influences are of less consequence.

Professor TWITMYER, *Presenter*.

JOSEPH MADISON McCALLIE was born in Ringgold, Georgia. He received the degree of Bachelor of Arts from the University of Tennessee in 1887. In 1905 he enrolled as a graduate student, electing Psychology as his major and Child Psychology and Pedagogy as his minors. During 1906-07 he held a University Scholarship in Psychology. He has thirty-two units to his credit, three of which are for graduate work done at the University of Chicago in 1895-96.

Apart from his record as a student, Mr. McCallie has been Principal of the Centennial Grammar School, Trenton, since 1902.

The subject of his thesis is: "STANDARDIZATION OF SOME OF THE COMMON TESTS USED IN TESTING THE ACUTENESS OF THE VISION OF SCHOOL CHILDREN."

This thesis is an investigation relative to the visibility of some of the common tests used in determining the acuteness of the vision of school children, and it has as its purposes the determination of which of these tests, if

any, may be used as standards, or which should be discarded as unreliable or what modification should be made in their structure or size or in the interpretation of results that would make them reliable.

That these questions might be answered properly, 470 pupils in an elementary school were tested with the Snellen letters and the "illiterate E," constructed to be seen at the same distance, and 200 pupils were tested with the Snellen letters to be seen at 50 feet, 40 feet, 30 feet, 20 feet, 16 feet and 12 feet, respectively, and a black dot, constructed to be seen at 20 feet.

The results of these tests show that the "illiterate E" is practically useless as a test as now constructed, as it can be seen $1\frac{1}{2}$ times farther than it was supposed to be seen. The twelve-foot letter tests show that it is not at all reliable. All of the other tests are reliable, but the dot test is perhaps more accurate than any other.

Professor TWITMYER, *Presenter*.

FRANCIS NORTON MAXFIELD was born in Sandwich, Massachusetts. He received the degree of Bachelor of Arts from Haverford College in 1897. He enrolled as a graduate student in 1905, selecting Psychology as his major and Pedagogy and Sociology as his minors. During 1907-08 he held a Half University Scholarship in Psychology and during 1908-09 and 1910-11 he held a University Scholarship in the same subject. He has thirty-eight units recorded to his credit.

Aside from his record as a student, Mr. Maxfield is Professor of Physics and Chemistry, Friends' Preparatory School, Germantown.

The subject of his thesis is: "AN EXPERIMENT IN LINEAR SPACE PERCEPTION: A PSYCHOPHYSICAL STUDY OF SENSITIVITY IN THE DISCRIMINATION OF SMALL DIFFERENCES IN LINES ABOUT TWO INCHES LONG."

The experiment undertaken by Mr. Maxfield was in the field of Psychophysics. It was a study of sensitivity in the discrimination of small differences in the lengths of lines about two inches long. The thesis is based upon the judgments given by twelve subjects upon seven pairs of lines, each pair being composed of a standard line,—the same throughout the experiment, and a comparison line of seven differing lengths. Five hundred judgments were given by each subject on each pair,—a total of 42,000 judgments in all. It was the purpose of this investigation to apply in the field of vision the statistical methods developed by Dr. F. M. Urban in his monograph on "Statistical Methods in Psychophysics" which is based on an experiment with lifted weights. To this end the laboratory procedure was arranged as far as possible to conform with that of the earlier experiment so as to make a comparison of results.

The results of Mr. Maxfield's experiment agree in general with those obtained with lifted-weights. It was found in both cases that the data of a psychophysical experiment of this character may be treated by a number of different mathematical methods. It further appears that there is a general agreement between the results of these different methods. The thesis is a report of the conduct of the experiment with a description of the methods

of calculation and a statement of the results obtained with little reference to the theory of Psychophysics. Tables of data are furnished so that it is possible to follow all the calculations.

Professor TWITMYER, *Presenter*.

REUEL HULL SYLVESTER was born in Lynnvile, Iowa. He received the degrees of Bachelor of Arts and Master of Arts from the University of Iowa in 1908 and 1909, respectively. In 1910 he entered the Graduate School as Harrison Fellow in Psychology, and was reappointed to that Fellowship for the present year. His major is Psychology and his minors Child Psychology and Pedagogy. He has thirty-seven and one-half units recorded to his credit, thirteen and one-half of which are for graduate work done at the University of Iowa.

In addition to his work as a student, Mr. Sylvester was Professor of Psychology and Education at Penn College during 1909-10.

The subject of his thesis is: "THE FORM BOARD TEST."

The form board test is applied to children to determine their ability at form perception and form memory, their motor skill and their general poise and self-control. The test consists of having the child fit a number of variously shaped blocks into corresponding recesses in the surface of the board.

The purpose of this investigation was to determine the best method of applying the test and the best interpretation of its results.

Through preliminary tests of 400 children the plan of procedure was determined upon. Then under carefully controlled conditions the test was applied to 500 normal children and to all of the 675 children in the special backward classes of the Philadelphia public schools. Results and conclusions are as follows:

First, that the best method of applying the test is to urge the child to place the blocks in the shortest possible time.

Second, that the average time of three such trials is the index of the child's form board ability.

Third, that the best interpretation of the result is through comparing them with standards for each age. These standards were definitely established in the forming of a curve of averages and limiting zones by the testing of the 500 normal children. The reliability of these standards was then proven by their application to the 675 children in the special backward classes.

The Executive Committee certifies that these four candidates have fulfilled the conditions prescribed for the Doctorate.

IN PHYSICS:

Professor GOODSPEED, *Presenter*.

RALPH WINFRED DUNCAN was born in Oakland City, Indiana. He received the degree of Bachelor of Arts from Indiana University in 1909. He entered the Graduate School the same year, electing Physics as his major

and first minor and Mathematics as his second minor. From 1910 to the present, he held the Tyndale Fellowship in Physics. He has twenty-six and one-half units to his credit including a unit for work done in Mathematics at the University of Indiana.

In addition to his record as a student, Mr. Duncan has been Instructor in Physics at this University during the year 1909-10.

The subject of his thesis is: "THE OPTICAL CONSTANTS OF SODIUM AND POTASSIUM."

This thesis was jointly compiled by Messrs. Ralph and Robert Duncan and the short abstract was read when Mr. Robert Duncan was presented.

Professor GOODSPEED, *Presenter*.

ROBERT CARITHERS DUNCAN was born in Loveland, Colorado. He received the degree of Bachelor of Arts from Indiana University in 1909 and entered the Graduate School the same year, electing Physics as his major and first minor and Mathematics as his second minor. He has twenty-five units recorded to his credit. Since 1910 he has held the Tyndale Fellowship in Physics.

Apart from his record as a student, Mr. Duncan has been Instructor in Physics at this University during the year 1909-10.

The subject of his thesis is: "THE OPTICAL CONSTANTS OF SODIUM AND POTASSIUM."

For most of the common metals, the optical constants, i. e., the indices of refraction and absorption, are well known, but up to the present time only one measurement has been made upon any of those which are highly oxidizable. This was made upon sodium by P. Drude about 1898.

The optical properties can be determined by the study of the light reflected from the polished surface of the metal. This reflecting surface, however, must be plane and free from films of oxide or other foreign matter.

The authors have obtained such surfaces of both sodium and potassium as follows: The metal was first melted in a vacuum and then by air pressure forced through a small tube and pressed against a plane glass plate, special precautions being taken to prevent any oxide from entering the tube. After the metal had solidified its optical properties were determined by an examination of the surface through the glass plate.

The apparatus for the determination of the constants consisted of a spectroscope fitted with two nicol prisms and a Soleil-Babinet compensator. A number of surfaces of both sodium and potassium were examined and the optical properties of both metals determined for various wave-lengths throughout the visible spectrum.

The index of refraction of sodium was found to be very low compared to that of other metals, and has a minimum value near the D-line. The reflecting power of sodium is somewhat higher than that of silver. The index of potassium is very slightly higher than that of sodium.

Professor GOODSPEED, *Presenter*.

ENGELHARDT AUGUST ECKHARDT was born in Cedarburg, Wisconsin. He received the degree of Bachelor of Science from this University in 1908 and the following September entered the Graduate School. He elected Physics as his major and Mathematics as his two minors and has twenty-four and one-half units recorded to his credit.

Aside from his record as a student, Mr. Eckhardt has been Instructor in Physics at this University from 1908 to date.

The subject of his thesis is: "THE OPTICAL CONSTANTS OF SOLID SOLUTIONS."

With but few exceptions the optical constants of the pure metals are now well known. A few isolated measurements on alloys have been made, but only Littleton has investigated entire alloy-series. The present investigation contributes to the study of a general relation between the optical constants of alloys and their chemical constitution. Binary alloys only are considered. Utilizing the results of metallographic investigations it is proposed to divide the alloys into three groups as follows:

Group 1: The components are completely mutually soluble.

Group 2: The components form a eutectic mixture and no compound.

Group 3: The components form one or more intermetallic compounds.

The optical constants of a series of nine gold-silver alloys were measured. Gold and silver are completely mutually soluble. Hence their alloys belong to the first of the groups defined above. The concentration-refractive index curve plotted from the results shows a distinct maximum. The refractive indices of several of the alloys are found to be higher than those of either gold or silver. The concentration-absorptive index curve on the other hand shows a distinct minimum, the absorptive indices of some of the alloys being lower than those of their components. Roughly, the maximum refractive and the minimum absorptive indices are shown to occur at the same concentration.

The alloy series copper-nickel and also iron-manganese belong to group I. The results of Littleton on these two series are in accord with those stated above. The results of the present work, supported by those just quoted, permit the conclusion that the curve of the gold-silver alloys are characteristic of binary alloys, the components of which are completely mutually soluble.

The Executive Committee certifies that these three candidates have fulfilled the conditions prescribed for the degree of Doctor of Philosophy.

IN CHEMISTRY:

Professor TAGGART, *Presenter*.

NEWCOMB KINNEY CHANEY was born in Northfield, Minnesota. He received the degrees of Bachelor of Science and Master of Science from Carleton College in 1904 and 1905, respectively. From 1907 to 1910, he was Rhodes Scholar at Balliol College, Oxford University, from which insti-

tution he received a Bachelor of Arts degree in 1910. The same year he entered the Graduate School as Harrison Fellow in Chemistry. His major and minors are in Chemistry and he has in addition to laboratory work, twenty-seven and one-half units to his credit, eighteen units being for work done at Carleton College and Oxford University. The Executive Committee certifies that he has satisfied the requirements prescribed for the Doctorate.

The subject of his thesis is: "THE ELECTROLYTIC PREPARATION OF ANTIMONY."

This thesis gives the results of (1) A study of the action of the current under varied conditions on antimony solutions, using the lactates of ammonium, sodium and barium. Antimony may be deposited but not quantitatively.

(2) Determination of the proper conditions for the quantitative estimation of antimony, using hot ammonium sulphide as an electrolyte.

(3) A study of the action of the current under varied conditions on antimony solutions, using the tartrates of ammonium, sodium and potassium, respectively. Antimony may be deposited but not quantitatively.

(4) Investigation of the hydro-sulphides of barium, strontium and calcium as electrolytes for the quantitative estimation of antimony. Separation of antimony from tin, using an original device, employing calcium hydro-sulphide as an electrolyte.

IN ZOOLOGY:

Professor CALVERT, *Presenter*.

EDWARD EMBREE WILDMAN was born in Selma, Ohio. He received the degrees of Bachelor of Science and Master of Science from this University in 1904 and 1908, respectively. He enrolled as a graduate student in 1904, electing Zoology as his major and one minor and Botany as his second minor. He has twenty-four units to his credit and the Executive Committee certifies that he has fulfilled the conditions prescribed for the degree of Doctor of Philosophy.

In addition to his record as a student, Mr. Wildman has been Instructor in Biology at the Central High School, Philadelphia, during 1907-08, and Professor from 1908 to date.

The subject of his thesis is: "THE SPERMATOGENESIS OF *ASCARIS MEGALOCEPHALA*, WITH SPECIAL REFERENCE TO THE TWO CYTOPLASMIC INCLUSIONS, THE REFRACTIVE BODY AND THE 'MITOCHONDRIA'; THEIR ORIGIN, NATURE AND RÔLE IN FERTILIZATION."

In recent years many zoologists in Europe and a few in America have discovered in the germ and body cells of a great variety of animals threads or granules which show certain characteristic reactions to chemicals and dyes, and which appear to give rise to specific secretions in the cytoplasm of those cells,—yolk, connective-tissue fibers, muscle fibers, etc. These threads or granules have been given the name *mitochondria*, and by many

they are considered of great importance in heredity as bearers or determiners of structural characteristics in the offspring. Some of these authors maintain that the mitochondria arise in the nucleus, while the others hold that they are strictly cytoplasmic factors.

A study of the history of the refractive body, which is the most conspicuous structure in the spermatozoon of *Ascaris*, shows that it is of mitochondrial origin. This has never been suspected before. The mitochondria from which it arises takes its origin in the karyochromatin of the nucleus. This study proves further that the rôle of the mitochondria in *Ascaris* in forming the refractive body is merely to provide a supply of food for the spermatozoon, and not to play any part whatever in fertilization.

A few authors have used the name mitochondria to represent small granules to be found in the spermatid, many of which are retained in the spermatozoon and carried by it into the egg where they fuse with similar but smaller ones. These granules, however, do not show the characteristic chemical reactions nor physiological behavior of mitochondria, and should not therefore be called by that name.



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